Dear Colleagues:

As Chair of the Expert Panel on Knowledge Translation I am pleased to share with you the Champlain Primary Care Cardiovascular Disease Prevention and Management Guideline.

Cardiovascular disease (CVD) continues to be the leading cause of death in Ottawa and our surrounding region (the Champlain District). The burden of CVD is expected to double as the generation of baby boomers age. In addition to the educational and policy interventions required to manage this epidemic, it will be important for our local medical community to be aggressive in efforts to ensure the early identification and treatment of CVD risk factors and management of those with existing disease.

In our region we have many of Canada’s foremost experts in the prevention and management of heart disease and stroke. This guideline represents the combined efforts of more than 45 specialists and community-based practitioners from across our region.

The guideline is intended to serve as a desktop resource for you and other primary care doctors working in our community. A one-page algorithm has been prepared to summarize evidence-based strategies for the major CVD risk factors as well as for the management of patients with diabetes, heart disease and stroke. In an effort to make this guideline more useful to your practice we have also included practical information on counselling and prescribing as well as a summary of local specialty and community resources.

I hope you will find this guideline useful to your practice.

Best regards,

Lyall Higginson
Chair, Expert Panel on Knowledge Translation
Champlain CVD Prevention Network
Cardiologist, University of Ottawa Heart Institute

The Champlain Local Health Integration Network is pleased to support the 2012 update of the Champlain Primary Care Cardiovascular Disease Prevention & Management Guideline. As we look to strengthen and further integrate primary care services across the region, this locally-tailored resource serves to support this mandate along with our strategic priority of chronic disease prevention and management.

The primary care community is a key partner for the prevention and management of cardiovascular disease. These evidence-based guidelines support the excellence in service that these physicians are committed to delivering in their day-to-day practices. Encouraging common practices that achieve the best results will go a long way in improving the quality of care for Champlain residents and reducing the significant burden of cardiovascular disease in the region.

Lastly, this resource exemplifies the sense of partnership that exists here in the region in building healthier communities which bears recognition.

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THE CHAMPLAIN CARDIOVASCULAR DISEASE PREVENTION STRATEGY & NETWORK:

The Champlain Cardiovascular Disease (CVD) Prevention Strategy is a five-year plan designed to eliminate disparities in CVD health and make the residents of the Champlain District the most heart healthy and stroke-free in Canada. The Champlain CVD Prevention Network (CCPN) was formed in November 2005 to provide leadership to the implementation of the Champlain CVD Prevention Strategy. The CCPN represents partners from public health, specialty (cardiac and stroke) care, primary care, hospitals, community health, and academia who are committed to the vision and mission of the CCPN.

This guideline has been developed in collaboration with the following partners:

This initiative is sponsored by the Champlain Local Health Integration Network, the Ministry of Health and Long-Term Care, and Pfizer Canada Inc., a Founding Industry Partner of the Champlain CVD Prevention Network.

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To receive a copy of the Guideline, or to provide any feedback, please email us at ccpn@ottawaheart.ca

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### SUMMARY TABLE 1: SCREENING

<table>
<thead>
<tr>
<th>Population → Targets ↓</th>
<th>Adult &lt;40 yrs with Risk Factors</th>
<th>Adult at High Risk* for CVD OR with CAD or PVD OR with TIA/ Stroke</th>
<th>Adult with ↓ eGFR or CKD OR with Diabetes Mellitus (DM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking</td>
<td>Identify and Advise all smokers to quit at each visit.</td>
<td>Adult at High Risk* etc: <strong>More frequently as indicated</strong></td>
<td></td>
</tr>
<tr>
<td>Physical Activity Status</td>
<td>Adult &lt; 40 yrs etc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMI &amp; Waist</td>
<td>Annually or as indicated</td>
<td>Every 3 to 6 months or as indicated</td>
<td></td>
</tr>
<tr>
<td>Framingham Risk Score (FRS) for Total CVD**</td>
<td>Every 1 to 3 years</td>
<td>Classified as high risk; no FRS required</td>
<td></td>
</tr>
<tr>
<td>Fasting (9-12h) Lipid Profile</td>
<td>Every 1 to 3 years + FRS Screen at any age in adults with major risk factors</td>
<td>Annually</td>
<td></td>
</tr>
<tr>
<td>Blood Pressure (BP)***</td>
<td>At all appropriate clinic visits</td>
<td>Proper BP measurement every 3 to 6 months or as indicated</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Proper BP measurement annually in persons with borderline hypertension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FBG or HbA1c</td>
<td>Screen every 3 years in individuals ≥ 40 years of age.</td>
<td>Screen earlier and/or more frequently in people with additional risk factors for diabetes</td>
<td></td>
</tr>
<tr>
<td>eGFR/ ACR</td>
<td>Screen in patients with hypertension, heart failure, First Nations people, unexplained anemia, family history of end-stage renal disease, autoimmune disease, and edema</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edinburgh Claudication Questionnaire**** &amp; Physical Exam</td>
<td>Annually</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*High risk is defined as a 20% or greater 10-year risk of CAD-related death or non-fatal MI as determined by the Framingham Risk Score for Total CVD.

**Framingham Risk Score for Total CVD (see Appendix A)

*** Recommended Technique for Office Blood Pressure Measurement (see page 13)

**** Edinburgh Claudication Questionnaire (see page 63)
# Summary Table 2: Recommended Targets

<table>
<thead>
<tr>
<th>Population→</th>
<th>Targets ↓</th>
<th>Adult &lt;40 yrs with Risk Factors</th>
<th>Adult Male ≥40 yrs</th>
<th>Adult Female ≥50 yrs and/or Post-menopausal</th>
<th>Adult at High Risk* for CVD OR with CAD or PVD OR with TIA/Stroke</th>
<th>Adult with ↓ eGFR or CKD OR with Diabetes Mellitus (DM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking</td>
<td>Smoke-free</td>
<td>Primary target: patient smoke-free</td>
<td>Secondary target: patient makes aided quit attempt which includes: 1) quit smoking pharmacotherapy; 2) behavioural support; and 3) follow-up support.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Activity Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMI &amp; Waist</td>
<td>BMI: 18.5 to 24.9 kg/m²</td>
<td>Waist: Men ≤102 cm (40’’); Women ≤88 cm (35’’) (see page 10 for waist circumference cut-offs by ethnicity)</td>
<td>For patients with dyslipidemia, see cholesterol guidelines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fasting (9h) Lipid Profile</td>
<td>If low risk, treat when: LDL-C ≥ 5.0 mmol/L or TC/ HDL-C ≥ 6.0</td>
<td>If high risk, treat immediately to target: 1º target: LDL-C &lt;2.0 mmol/L or lower LDL-C by at least 50% 2º target: non-HDL-C &lt;2.6 mmol/L or apoB &lt; 0.8g/L</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood Pressure (BP) (mmHg)</td>
<td>Below 140/90</td>
<td>Below 140/90</td>
<td>Below 130/80 in patients with diabetes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fasting Blood Glucose (FBG) (mmol/L)</td>
<td>&lt;5.6</td>
<td>&lt; 5.6</td>
<td>If diabetic: To achieve HbA1c target aim for BG = 4 – 7 before meals BG = 5 – 10 after meals (5 – 8 if not meeting HbA1c target)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HbA1c</td>
<td>If FBG elevated, &lt;6%</td>
<td>If diabetic: &lt;7% (&lt;6.5% if possible without hypoglycemia)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>eGFR/ ACR</td>
<td>ACR&lt;40 **</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*High risk is defined as a 20% or greater 10-year risk of CAD-related death or non-fatal MI as determined by the Framingham Risk Score for Total CVD.

** If albuminuria or proteinuria, use ACEI or ARB as first line therapies.

ACEI = Angiotensin Converting Enzyme Inhibitor  
ARB = Angiotensin Receptor Blocker  
ACR = Albumin to Creatinine Ratio  
BMI = Body Mass Index  
BP = Blood Pressure  
CKD = Chronic Kidney Disease  
CAD = Coronary Artery Disease  
CVD = Cardiovascular Disease  
DM = Diabetes Mellitus  
eGFR = Estimated Glomerular Filtration Rate  
FBG = Fasting Blood Glucose  
FRS = Framingham Risk Score for Total CVD  
MI = Myocardial Infarction  
PVD = Peripheral Vascular Disease  
TIA = Transient Ischemic Attack
INTRODUCTION

THE CASE FOR ACTION

CVD IS THE LEADING CAUSE OF DEATH
Cardiovascular Disease (CVD) is the single leading cause of death, disability, and hospitalization in our province and across the Champlain District. The number of deaths caused by CVD is expected to double by 2018 as a result of an aging demographic, population growth, and increasing prevalence of CVD risk factors. 1

MOST CVD IS PREVENTABLE
An estimated 80% of premature CVD deaths are preventable through early management of CVD risk factors. 2 Evidence-based strategies for CVD prevention and management are already well established and have been proven to be highly cost-effective.

CVD IN OUR REGION
The Champlain District encompasses a significant portion of Eastern Ontario and includes four municipal planning areas:
• The City of Ottawa;
• Renfrew County;
• Eastern Counties of Prescott & Russell and Stormont, Dundas & Glengarry; and,
• Parts of northern Leeds, Grenville & Lanark County.

The geographic boundaries of the Champlain District also align with the boundaries of the Champlain Local Health Integration Network (LHIN).

THE CHAMPLAIN DISTRICT IS HOME TO ONTARIO CVD HOT SPOTS
Significant differences in the rates of CVD mortality and CVD risk factors exist within the Champlain District. Three of Champlain’s counties – Renfrew, Eastern Ontario (Prescott & Russell), and Leeds, Grenville & Lanark - have been identified as Ontario hot spots for CVD morbidity and mortality. 1,3 These counties experience rates of morbidity and mortality which are significantly higher than both the City of Ottawa and the provincial average. The increase in CVD mortality in these communities is also associated with higher prevalence of CVD risk factors. The rates of several key CVD risk factors (such as smoking, hypertension, and diabetes) in these counties are significantly higher than the provincial average. 4
### SELF-REPORTED PREVALENCE OF RISK FACTORS IN PERSONS AGED 12 YEARS AND OLDER IN CANADA, ONTARIO, AND CHAMPLAIN REGION AND ITS HEALTH REGIONS, 2009.

<table>
<thead>
<tr>
<th>REGION</th>
<th>Hypertension n (%)</th>
<th>Diabetes n (%)</th>
<th>Overweight* n (%)</th>
<th>Obesity* n (%)</th>
<th>Daily Smoking n (%)</th>
<th>Physical Inactivity n (%)</th>
<th>&lt; 5 servings fruit &amp; veg/day n (%)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>5,395,232</td>
<td>2,023,212</td>
<td>11,363,707</td>
<td>6,035,915</td>
<td>5,260,351</td>
<td>16,017,095</td>
<td>15,376,411</td>
</tr>
<tr>
<td>(16.9%)</td>
<td>(6.0%)</td>
<td>(33.7%)</td>
<td>(17.9%)</td>
<td>(15.6%)</td>
<td>(47.5%)</td>
<td>(45.6%)</td>
<td></td>
</tr>
<tr>
<td>Ontario</td>
<td>2,247,162</td>
<td>836,153</td>
<td>4,442,066</td>
<td>2,273,292</td>
<td>1,881,345</td>
<td>6,440,995</td>
<td>5,761,620</td>
</tr>
<tr>
<td>(17.2%)</td>
<td>(6.4%)</td>
<td>(34.0%)</td>
<td>(17.4%)</td>
<td>(14.4%)</td>
<td>(49.3%)</td>
<td>(44.1%)</td>
<td></td>
</tr>
<tr>
<td>Champlain</td>
<td>183,409</td>
<td>75,087</td>
<td>411,133</td>
<td>220,337</td>
<td>157,560</td>
<td>512,070</td>
<td>562,538</td>
</tr>
<tr>
<td>(14.9%)</td>
<td>(6.1%)</td>
<td>(33.4%)</td>
<td>(17.9%)</td>
<td>(12.8%)</td>
<td>(41.6%)</td>
<td>(45.7%)</td>
<td></td>
</tr>
<tr>
<td>City of Ottawa</td>
<td>127,072</td>
<td>48,536</td>
<td>277,980</td>
<td>137,666</td>
<td>82,952</td>
<td>350,343</td>
<td>423,588</td>
</tr>
<tr>
<td>(14.4%)</td>
<td>(5.5%)</td>
<td>(31.5%)</td>
<td>(15.6%)</td>
<td>(9.4%)</td>
<td>(39.7%)</td>
<td>(48.0%)</td>
<td></td>
</tr>
<tr>
<td>Eastern Counties</td>
<td>27,868</td>
<td>16,920</td>
<td>76,624</td>
<td>51,158</td>
<td>41,205</td>
<td>97,938</td>
<td>88,582</td>
</tr>
<tr>
<td>(14.0%)</td>
<td>(8.5%)</td>
<td>(40.0%)</td>
<td>(25.7%)</td>
<td>(20.7%)</td>
<td>(49.2%)</td>
<td>(44.5%)</td>
<td></td>
</tr>
<tr>
<td>Renfrew County</td>
<td>18,761</td>
<td>7,200</td>
<td>39,651</td>
<td>22,310</td>
<td>22,716</td>
<td>44,620</td>
<td>32,755</td>
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<tr>
<td>(18.5%)</td>
<td>(7.1%)</td>
<td>(39.1%)</td>
<td>(22.0%)</td>
<td>(22.4%)</td>
<td>(44.0%)</td>
<td>(32.3%)</td>
<td></td>
</tr>
<tr>
<td>Leeds, Grenville &amp; Lanark</td>
<td>8,877</td>
<td>2,975</td>
<td>17,803</td>
<td>10,845</td>
<td>10,125</td>
<td>20,251</td>
<td>18,043</td>
</tr>
<tr>
<td>(18.5%)</td>
<td>(6.2%)</td>
<td>(37.1%)</td>
<td>(22.6%)</td>
<td>(21.1%)</td>
<td>(42.2%)</td>
<td>(37.6%)</td>
<td></td>
</tr>
</tbody>
</table>

*Prevalence based on the population aged 18 and over.
**Prevalence based on the population aged 12 and over.

Source: For Canada and Ontario population estimates, Statistics Canada, CANSIM, table 051-0001.
For Champlain, Ottawa, Eastern Counties, Renfrew County and Leeds, Grenville & Lanark population estimates, Ontario Ministry of Health and Long-Term Care, intelliHEALTH Ontario, Date Extracted: March 2011
THE CHAMPLAIN CVD PREVENTION & MANAGEMENT GUIDELINE

The development of the Champlain Primary Care CVD Prevention & Management Guideline began in April 2006 under the direction of the Expert Panel on Knowledge Translation of the Champlain CVD Prevention Network (CCPN).

GOAL OF THE GUIDELINE

The goal of the Guideline is to summarize evidence-based strategies for the prevention and management of Coronary Artery Disease (CAD), Peripheral Vascular Disease (PVD), Stroke/TIA, Heart Failure and Diabetes that are tailored to primary care practitioners working in the Champlain District.

THE GUIDELINE DEVELOPMENT PROCESS

A total of ten Evidence Monitoring Committees were established for each of the major CVD risk factors and for the management of patients with Coronary Artery Disease (CAD), Peripheral Vascular Disease (PVD), Stroke/TIA, Heart Failure and Diabetes. These Committees are responsible for reviewing the latest evidence and practice guidelines and assisting with the guideline development process. Each Committee is comprised of local knowledge and practice experts.

Committee members reviewed the most recent Canadian guidelines along with other international guidelines and/or sources of evidence as required. Recommendations from these guidelines applicable to primary care were extracted and discussed with respect to local practices in the Champlain District. Recommendations were then summarized and placed into an algorithmic format. A repository of knowledge translation tools appropriate to primary care and conforming to best practice recommendations was started and continues to be updated as new tools are reviewed and approved. This final format of the Guideline is based on comprehensive reviews and feedback provided by community practitioners throughout our LHIN for whom it was developed. The Guideline continues to be regularly reviewed to ensure its alignment with current knowledge.
SCREENING FOR CVD RISK FACTORS

OVERVIEW OF CVD RISK FACTORS

The following summarizes major risk factors for CVD (Coronary Artery Disease and Stroke).

NON-MODIFIABLE:

- Age: Male ≥45 years; Female ≥55 years
- A history of premature CVD in a first-degree family member (<55 years male and <65 years female)

MODIFIABLE:

- Elevated blood pressure
- Smoking
- Sedentary lifestyle (physical inactivity)
- Stress
- Dyslipidemia
- Abdominal obesity
- Poor dietary habits
- Impaired Glucose Tolerance (IGT) or Diabetes Mellitus

TARGET ORGAN DAMAGE:

- Left ventricular hypertrophy
- Microalbuminuria or proteinuria
- Chronic Kidney Disease (CKD) (Glomerular Filtration Rate (eGFR) <60 ml/min/1.73m²)

PRESENCE OF ATHEROSCLEROTIC VASCULAR DISEASE:

- Known Cerebrovascular Disease; previous Stroke or TIA
- Coronary Artery Disease (CAD)
- Peripheral Vascular Disease (PVD)

OVERVIEW OF RISK FACTORS FOR DIABETES

The following are risk factors for Diabetes which should be considered in determining the frequency of screening for adults.

- First-degree relatives with Diabetes
- Member of high-risk population (e.g., people of Aboriginal, Hispanic, Asian, South Asian, or African descent)
- History of Impaired Glucose Tolerance (IGT) or Impaired Fasting Glucose (IFG)
- Presence of complications associated with Diabetes
- Vascular disease
- History of Gestational Diabetes Mellitus (GDM)
- History of delivery of a macrosomic infant
- Hypertension
- Dyslipidemia
- Overweight
- Abdominal obesity
- Polycystic ovary syndrome
- Acanthosis nigricans
- Schizophrenia
SCREENING RECOMMENDATIONS

The following provides a summary of the recommended frequency of screening for adults. Risk factor screening is recommended for all males 40 years of age and older, all females 50 years of age and older or post-menopausal, and all adults with diagnosed disease (Diabetes, CKD, Stroke, CAD, PVD). Screening is also recommended in all adults with identified risk factors at any age.

<table>
<thead>
<tr>
<th>Population →</th>
<th>Targets ↓</th>
<th>Adult &lt;40 yrs with Risk Factors</th>
<th>Adult at High Risk* for CVD OR with CAD or PVD OR with TIA/ Stroke</th>
<th>Adult with ↓ eGFR or CKD OR with Diabetes Mellitus (DM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking</td>
<td></td>
<td>Identify and advise all smokers to quit at each visit.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Activity Status</td>
<td>Adult &lt; 40 yrs</td>
<td>Annualy</td>
<td>Adult at high risk*</td>
<td>More frequently as indicated</td>
</tr>
<tr>
<td>BMI &amp; Waist</td>
<td></td>
<td>Annually or as indicated</td>
<td>Every 3 to 6 months or as indicated</td>
<td></td>
</tr>
<tr>
<td>Framingham Risk Score (FRS) for Total CVD**</td>
<td>Every 1 to 3 years</td>
<td>Classified as high risk; no FRS required</td>
<td>Repeat every 1 – 4 months until target lipid levels achieved and, thereafter, every 6 to 12 months as indicated.</td>
<td></td>
</tr>
<tr>
<td>Fasting (9-12h)</td>
<td>Lipid Profile</td>
<td>Every 1 to 3 years + FRS Screen at any age in adults with major risk factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood Pressure (BP)***</td>
<td>At all appropriate clinic visits</td>
<td>Proper BP measurement annually in persons with with borderline hypertension</td>
<td>Proper BP measurement every 3 to 6 months or as indicated</td>
<td></td>
</tr>
<tr>
<td>FBG or HbA1c</td>
<td></td>
<td>Screen every 3 years in individuals ≥ 40 years of age</td>
<td>Screen earlier and/or more frequently in people with additional risk factors for diabetes</td>
<td></td>
</tr>
<tr>
<td>eGFR/ACR</td>
<td></td>
<td>Screen in patients with hypertension, heart failure, First Nations people, unexplained anemia, family history of end-stage renal disease, autoimmune disease, and edema</td>
<td>Annually or as indicated</td>
<td></td>
</tr>
<tr>
<td>Edinburgh Claudication Questionnaire**** &amp; Physical Exam</td>
<td>Annually</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*High risk is defined as a 20% or greater 10-year risk of CAD-related death or non-fatal MI and as determined by the Framingham Risk Score for Total CVD.

**Framingham Risk Score for Total CVD (see Appendix A)

***Recommended Technique for Office Blood Pressure Measurement (see page 15)

****Edinburgh Claudication Questionnaire (see page 65)

ACR = Albumin to Creatinine Ratio  
BMI = Body Mass Index  
BP = Blood Pressure  
CAD = Coronary Artery Disease  
CKD = Chronic Kidney Disease  
CVD = Cardiovascular Disease  
DM = Diabetes Mellitus  
eGFR = Estimated Glomerular Filtration Rate  
FBG = Fasting Blood Glucose  
FRS = Framingham Risk Score for Total CVD  
MI = Myocardial Infarction  
PVD = Peripheral Vascular Disease  
TIA = Transient Ischemic Attack
THE FRAMINGHAM RISK SCORE FOR TOTAL CVD

The Framingham Risk Score (FRS) for total CVD is a key tool in determining the most appropriate treatment target for managing cholesterol. Use of the risk assessment tool (see Appendix A) has been shown to increase adherence to therapeutic measures. The FRS is applicable to a large percentage of the Canadian population and provides a reasonable estimate of the 10-year risk of a major CVD (cardiovascular death, nonfatal myocardial infarction, and stroke as a combined end point, and total mortality as a secondary end point). This tool is designed to estimate risk in adults who do not have CAD.

The risk factors included in the Framingham calculation are age, total cholesterol, HDL-C, systolic blood pressure, treatment for hypertension, cigarette smoking, and Diabetes. Because of a larger database, Framingham estimates are more robust for total cholesterol than for LDL cholesterol; however, LDL cholesterol remains the primary target of therapy.

- **Low risk** is defined as a 10-year CAD related death or non-fatal MI risk less than 10%.
- **Moderate risk** is defined as a 10-year risk of 10% to 20%.
- **High risk** is defined as a 10-year risk over 20%.

WHO SHOULD BE SCREENED?

Screen with a full lipid profile and the Framingham Risk Score for Total CVD every 1 to 3 years for the following:
- All males ≥40 years and all women ≥50 years or who are post-menopausal.

In addition, adults with the following risk factors should be screened at any age:
- Diabetes Mellitus;
- Current or recent (within the past year) cigarette smoking;
- Hypertension;
- Abdominal obesity - waist circumference >102 cm for men and >88 cm for women (lower cut-offs are appropriate for South and East Asians);
- A body mass index (BMI) of greater than 27 kg/m² (overweight) or greater than 30 kg/m² (obese);
- Autoimmune chronic inflammatory conditions such as rheumatoid arthritis, SLE, and psoriasis;
- Patients with chronic HIV infection;
- Family history of premature Coronary Artery Disease (CAD);
- Stigmata of hyperlipidemia (eg, xanthoma);
- Exertional chest discomfort, dyspnea, erectile dysfunction, claudication, Chronic Kidney Disease; or,
- Evidence of atherosclerosis.

Screen children who have a family history of severe hypercholesterolemia or chylomicronemia. Other patients may be screened at the discretion of their physician, particularly when lifestyle changes are indicated.

METABOLIC SYNDROME

Metabolic syndrome incorporates many of the risk factors considered in the calculation of the Framingham Risk Score for Total CVD along with other risk factors. Individuals who meet the definition of metabolic syndrome by the criteria listed below are often at higher risk than estimated by the Framingham Risk Score for Total CVD and additional investigations (e.g., Lp(a), Apo B, hsCRP) may be appropriate to further define short-term risk and/ or the need for more aggressive management of existing risk factors.

CRITERIA USED TO DEFINE METABOLIC SYNDROME (three or more of the following):

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Defining Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal obesity</td>
<td>Waist circumference</td>
</tr>
<tr>
<td>Men</td>
<td>&gt;102 cm (40&quot;)</td>
</tr>
<tr>
<td>Women</td>
<td>&gt;88 cm (35&quot;)</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>≥1.7 mmol/L</td>
</tr>
<tr>
<td>High-density lipoprotein cholesterol (HDL-C)</td>
<td>&lt;1.0 mmol/L</td>
</tr>
<tr>
<td>Men</td>
<td>&lt;1.3 mmol/L</td>
</tr>
<tr>
<td>Women</td>
<td></td>
</tr>
<tr>
<td>Blood pressure</td>
<td>&gt;130/85 mmHg</td>
</tr>
<tr>
<td>Fasting glucose</td>
<td>5.7 – 7.0 mmol/L</td>
</tr>
</tbody>
</table>
RACIAL/ ETHNIC POPULATIONS

The risk rates for CAD vary among ethnic groups in Canada. Individuals of South Asian ancestry have been found to be at the highest risk of developing CAD and other vascular diseases.\textsuperscript{10,11} The higher risk among South Asians is partly explained by an increased prevalence of abdominal obesity, glucose intolerance, hyper-triglyceridemia, low HDL-C levels, and elevated levels of Lp(a). Individuals of First Nations ancestry are also at markedly increased risk for Diabetes and CAD.\textsuperscript{12} Individuals of South Asian, Chinese, and Japanese descent have lower cut-off points for waist measurement.\textsuperscript{7,8,10}

WAIST CIRCUMFERENCE CUT-OFFS BY ETHNICITY

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Men (cm)</th>
<th>Women (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATP III criteria*</td>
<td>&gt; 102</td>
<td>&gt; 88</td>
</tr>
<tr>
<td>Europids (white people of European origin, regardless of where they live in the world)</td>
<td>≥ 94</td>
<td>≥ 80</td>
</tr>
<tr>
<td>South Asians</td>
<td>≥ 90</td>
<td>≥ 80</td>
</tr>
<tr>
<td>Chinese</td>
<td>≥ 90</td>
<td>≥ 80</td>
</tr>
<tr>
<td>Japanese**</td>
<td>≥ 90</td>
<td>≥ 80</td>
</tr>
</tbody>
</table>

Adapted from the Criteria for Abdominal Obesity as Proposed by the IDF Consensus Committee on the Metabolic Syndrome\textsuperscript{13}

ATP III = Adult Treatment Panel III

* ATP III values for waist circumference continue to be the most common values used for clinical purposes; however, for white people of European origin, regardless of where they live in the world, the risk of CVD increases when the waist circumference rises above 94 cm in men and 80 cm in women \textsuperscript{6,9,13,14}

** There is a lack of agreement about ideal waist cut-off points for Japanese; however, the best agreement with CVD and Diabetes risk factors are 90 cm for males and 80 cm for females. \textsuperscript{34}

NOTES
HYPERTENSION

DIAGNOSIS OF HYPERTENSION

Source: Adapted from: Canadian Hypertension Education Program (CHEP). Recommendations for the Management of Hypertension 2011 (www.hypertension.ca)

IF random office SBP ≥ 140 and/or DBP ≥ 90 (SBP ≥ 130 and/or DBP ≥ 80 if patient has DM)
THEN schedule appointment for proper BP measurement within next few weeks.

If hypertensive urgency/emergency, TREAT IMMEDIATELY.

Visit 1
Take proper BP measurement (page 15) + history + physical and/or diagnostic tests.
If SBP ≥ 140 and/or DBP ≥ 90 (SBP ≥ 130 and/or DBP ≥ 80 if patient has DM)
THEN schedule for second visit within 1 month.

Visit 2 (within 1 month)

Borderline Hypertension:
SBP 130-139 and/or DBP 85-89
(< 130/< 80 if DM)

• Proper BP measurement annually or as clinically indicated
• Strong counselling around lifestyle factors

SBP 140-159 and/or DBP 90-99

SBP ≥ 160 and/or DBP ≥ 100 OR
SBP ≥ 140 and/or DBP ≥ 90 plus target organ damage or DM

If concerned about White Coat or Masked Hypertension, arrange for:
1st: Ambulatory BP monitoring (page 18 for referral information) or, if not available,
2nd: Home BP monitoring (recommend patient purchase OMRON® BP monitors)

Visit 3 (within 1 month)

Proper Office BP Measurement: If SBP ≥ 140 and/or DBP ≥ 90 OR
Ambulatory BP Monitoring: If awake SBP ≥ 135 and/or DBP ≥ 85 OR
Home BP Monitoring: If SBP ≥ 135 and/or DBP ≥ 85

Diagnosis:
HYPERTENSION

See Treatment Recommendations (Next Page)

BP = Blood Pressure  CKD = Chronic Kidney Disease  DBP = Diastolic Blood Pressure  DM = Diabetes Mellitus  SBP = Systolic Blood Pressure
TREATMENT OF HYPERTENSION

Source: Adapted from the Canadian Hypertension Education Program (CHEP). Recommendations for the Management of Hypertension 2006, 2009 and 2012.

KEY CONSIDERATIONS:
• Consider associated CVD risk factors when making treatment decision.
• Treat to target (<140/90 mmHg; <130/80 mmHg in patients with Diabetes).
• To achieve targets, sustained lifestyle modification plus medication is usually required – add second or third medications if necessary.
• Strategies to improve patient adherence to lifestyle modifications and antihypertensive therapy need to be incorporated in every patient’s management.

Lifestyle modification is the cornerstone for the prevention and management of hypertension and CVD.

All patients: Lifestyle counselling
• Smoke-free environment
• Achieve a healthy weight: BMI: 18.5 - 24.9 kg/m²
  • In those with BMI >25, start with weight loss target of 5% of body weight
  • Waist circumference: <102 cm in men, <88 cm for women (see page 10 for ethnic variations in cut-offs)
• Engage in regular physical activity: 30 (up to 60) minutes of moderate intensity activity 4 - 6 days/ week
• Sodium: <100 mmol/day (2300 mg or <1 teaspoon/ day) (See page 22 for a list of resources to assist patients to reduce sodium in their diet).
• Adopt healthy eating habits: high in fresh and frozen fruits and vegetables, low fat dairy products, dietary and soluble fibre, whole grains and proteins from plant sources, low in saturated fat/ cholesterol in accordance with Healthy Eating with Canada’s Food Guide
• Use the DASH diet to guide food choices (http://dashdiet.org/)
• Alcohol: in moderation (<2 drinks/ day); maximum 14 drinks/ week for men; maximum 9 drinks/ week for women
• Stress reduction

When considering choice of first line therapy:
• ACEI and ARBs are contraindicated in pregnancy; caution required in prescribing to women of child bearing potential
• ACEIs are not recommended as monotherapy for black patients without another compelling indication
• Beta blockers are not recommended for older patients without another compelling indication
• Use potassium sparing agents to avoid diuretic-induced hypokalemia
• Dual RAS blockade (ACE Inhibitor + ARB) is generally not recommended

Based on patient’s age, consider the following strategy:

For patients <55 years
1. Low-dose beta blocker or ACEI (ARB if ACEI not tolerated)
2. Add diuretic and/or long-acting CCB if necessary
3. Triple therapy eg: diuretic + ACEI/ARB + long-acting CCB
Follow every few weeks until target BP achieved then every few months

For patients >55 years
1. Diuretic or long-acting CCB
2. Add alternative from (1) or ACEI (or ARB if ACEI not tolerated)
Follow every few weeks until target BP achieved then every few months

If co-morbid condition present
• Coronary Artery Disease (CAD)
• Diabetes Mellitus
• Chronic Kidney Disease (CKD)
• TIA/ Ischemic Stroke
• Non-diabetic CKD with proteinuria
include ACEI or ARB as part of treatment strategy

If >79 years
Individualize treatment strategy: Plan a gradual lowering of BP to target and be concerned about orthostatic hypotension.

Follow-up Assessment:
• Assess adherence to treatment with every visit (more detail page 13)
• Where possible, simplify treatment regimes by using once daily dosing or fixed-dose combinations
• Behaviour modification: teach patients to take their pills on a regular schedule associated with a routine daily activity (e.g., brushing teeth)

Encourage self-management:
• Home BP monitoring: recommend Omron® monitors

Refer to Hypertension Clinic or specialist with interest in hypertension:
• If patients require more than 3 medications to control BP
• If there are persistent side effects
• Or if unable to control the hypertension
SUPPLEMENTAL INFORMATION

Source: Adapted from the Canadian Hypertension Education Program (CHEP). Recommendations for the Management of Hypertension 2006 and 2009

RECOMMENDED TECHNIQUE FOR OFFICE BLOOD PRESSURE (BP) MEASUREMENT

• Measurements should be taken with a sphygmomanometer known to be accurate.
• Automated office blood pressure measurements (e.g. BpTRU) can be used in the assessment of office blood pressure.
  • When using automated office oscillometric devices such as the BpTRU, the patient should be seated in a quiet room. With the device set to take measures at 1 or 2 minute intervals, the first measurement is taken by a health professional to verify cuff position and validity of the measurement. The patient is left alone after the first measurement while the device automatically takes subsequent readings. The BpTRU automatically discards the first measure and averages the next 5 measures. 2011 CHEP recommendations
  • Automated office SBP >135 or DBP >85 should be considered analogous to mean awake ambulatory SBP >135 and DBP >85.
  • Choose a cuff with an appropriate bladder width matched to the size of the arm.

<table>
<thead>
<tr>
<th>Arm Circumference</th>
<th>Size of Cuff</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 – 26 cm</td>
<td>Child Model</td>
</tr>
<tr>
<td>26 – 33 cm</td>
<td>Standard Adult</td>
</tr>
<tr>
<td>33 – 41 cm</td>
<td>Large</td>
</tr>
<tr>
<td>41 – 47 cm</td>
<td>Extra Large</td>
</tr>
<tr>
<td>&gt;47 cm</td>
<td>Thigh Cuff</td>
</tr>
</tbody>
</table>

• Place the cuff so that the lower edge is 3 cm above the elbow crease and the bladder is centered over the brachial artery.
• Have the patient rest comfortably and quietly for 5 minutes in the seated position with back supported, legs uncrossed, arm bare, and ensure patient does not talk during BP measurement.
• When first assessing blood pressure, take the blood pressure in both arms.
  • For follow up blood pressure measurements, use the arm with the highest readings.
• Take at least 2 measurements on the same arm.
• Increase the pressure rapidly to 30 mmHg above the level at which the radial pulse is extinguished.
• Place stethoscope over the brachial artery.
• Deflate the cuff at the approximate rate of 2 mmHg per heart beat.
• Read the systolic level (the first appearance of a clear tapping sound) and the diastolic level (the point at which the sounds disappear).
• Continue to auscultate at least 10 mmHg below phase V to exclude a diastolic auscultatory gap.
• Document:
  • BP to closest 2 mmHg on the manometer
  • Arm used
  • Patient position (sitting, standing, supine)
  • Heart rate

HOME BP MONITORING: ADVISE YOUR PATIENTS ON CORRECT TECHNIQUE  www.heartandstroke.ca

To prepare to take your blood pressure:
• Wait at least 2 hours after a big meal or heavy physical activity
• Do not exercise, smoke, or drink coffee, tea or cola (any drink containing caffeine) 30 minutes before
• Do not measure your blood pressure when you are upset or in pain
• Be in a calm, warm environment
• Empty your bladder or bowel
• Sit quietly and calmly for 5 minutes with your back against a firm surface and your arm supported on a table or firm surface with the cuff at heart level.
When taking your blood pressure:

- Do not speak
- Be seated
- Keep your back supported
- Keep your legs uncrossed and both feet flat on the floor
- Ensure your arm is supported
- Place the cuff on your bare arm, 3 cm (1½ in) above your elbow, at heart level

*Target home blood pressure measurement: <135/85*

**VALIDATED QUESTION TO ASSESS HYPERTENSIVE MEDICATION ADHERENCE**

If you are currently on treatment with drugs to lower your blood pressure, tick one of the following statements which most accurately describes you:

- I take my blood pressure pills every day regularly. I never forget to take them.
- I take my blood pressure pills almost every day. Occasionally I forget.
- Sometimes I either forget or decide not to take my blood pressure pills, for short periods of time (days).
- I frequently forget or decide not to take my blood pressure pills for extended periods of time (weeks or months).

**STRATEGIES TO ENHANCE ADHERENCE TO TREATMENT**

Simplify treatment regimens:

- Use long-acting, once daily medications
- Use fixed-dose, combination regimes
- Use unit-of-use packaging

Refer to Appendix C for patient education strategies around medication adherence

**IMPACT OF LIFESTYLE INTERVENTIONS ON BLOOD PRESSURE IN ADULTS**

<table>
<thead>
<tr>
<th>Lifestyle Risk Factor</th>
<th>Recommendations</th>
<th>Impact on Systolic/ Diastolic Blood Pressure (mmHg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Activity</td>
<td>Moderate exercise 3 or more times per week, at least 30 minutes at a time; or daily activity in 10-minute segments every day</td>
<td>↓10.3 / ↓7.5</td>
</tr>
<tr>
<td>Weight</td>
<td>A loss of 4.5 kg/10 lbs of total weight</td>
<td>↓7.2 / ↓5.9</td>
</tr>
<tr>
<td>Dietary Patterns</td>
<td>Follow the DASH diet</td>
<td>↓11.4 / ↓5.5</td>
</tr>
<tr>
<td>Sodium Intake</td>
<td>No more than 1 tsp salt per day (2300 mg of sodium)</td>
<td>↓5.8 / ↓2.5</td>
</tr>
<tr>
<td>Alcohol Intake</td>
<td>Limit your alcohol intake to 1-2 drinks a day to a weekly maximum of 14 drinks for men &amp; 9 drinks for women</td>
<td>↓4.6 / ↓2.3</td>
</tr>
</tbody>
</table>
## COMMUNITY RESOURCES - HYPERTENSION

### SPECIALTY CLINICS/PROGRAMS:

<table>
<thead>
<tr>
<th>Clinic/Program</th>
<th>Description</th>
<th>Appropriate for</th>
<th>Hours</th>
<th>Language</th>
<th>Cost</th>
<th>Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hypertension Clinic</strong></td>
<td>The Hypertension Clinic has been operating at the University of Ottawa Heart Institute for the past 15 years under the directorship of Dr. Frans Leenen. Dr. Leenen is a cardiologist and a certified hypertension specialist. Dr. Marcel Ruzicka joined the unit in 2001; Dr. Ruzicka is a nephrologist and a certified hypertension specialist. The Hypertension Clinic works on a referral-basis from family doctors and other specialists.</td>
<td>Patients who require assessment and management of hypertension.</td>
<td>Mon to Thurs: 9:00 a.m. – 5:00 p.m.</td>
<td>English, French, also accepts Quebec patients.</td>
<td>N/A</td>
<td>Physician referral required.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>To refer, fax the referral form along with the following information: patient name and demographics, copies of any recent tests, most recent blood pressure, family physician name and billing #. Fax referral to clinic and inform patient that clinic will contact them with appointment.</td>
</tr>
<tr>
<td><strong>Renal Hypertension Clinic</strong></td>
<td></td>
<td>Patients who require assessment and management of hypertension; specifically those with renal disease or diabetes.</td>
<td>Mon to Fri: 7:30 a.m. – 5:00 p.m.</td>
<td>English &amp; French</td>
<td>N/A</td>
<td>Physician offices can fax referrals to (613)738-8384. All referrals are promptly triaged by a nephrologist and patients are seen according to the urgency of the situation</td>
</tr>
</tbody>
</table>
Clinic/Program: **Ottawa Cardiovascular Centre**  
502-1355 Bank Street, Ottawa, ON K1H 8K7  
Tel: 613-738-1584 Fax: 613-738-9097  
E-mail: admin@ottawacvcentre.com  

**Ottawa Cardiovascular Centre (East)**  
204-595 Montreal Rd., Ottawa, ON K1K 4L2  
Tel: 613-749-5421 Fax: 613-749-6621  
E-mail: admin@ottawacvcentre.com  
Director: Dr. Joel Niznick  
Administrative Manager: May Moloughney

**Description:** Prompt access to comprehensive cardiovascular consultation, diagnosis, and follow up care.  
**Appropriate for:** Patients who require assessment and management of hypertension and hyperlipidemia  
**Hours:** Mon to Fri: 8:30 a.m. - 4:30 p.m. with telephones answered from 9:00 a.m. - 12:00 p.m. and 1:00 p.m. - 4:00 p.m.  
**Language:** English, French  
**Cost:** N/A  
**Referral:** Use referral form: [http://www.ottawacvcentre.com/OCC_Requisition_Form.pdf](http://www.ottawacvcentre.com/OCC_Requisition_Form.pdf)

**REFERRING PATIENTS FOR 24-HOUR BLOOD PRESSURE MONITORING:**  
The 24-hour blood pressure monitor is an excellent diagnostic tool that assists physicians in determining the patient’s blood pressure in normal daily life. This blood pressure monitor is put on and is worn for 24 hours. The machine automatically takes the blood pressure every 20 minutes from 6:00 a.m. to 10:00 p.m. and hourly from 10:00 p.m. to 6:00 a.m. The patient is asked to keep a diary detailing time at work, time of meals, medication, type and time of activities, and times when one has felt under stress. The monitor is returned to the Unit and is read by the attending physician.

Clinic/Program: **Hypertension Clinic**  
University of Ottawa Heart Institute  
40 Ruskin Street, Ottawa, ON K1Y 4W7  
Tel: 613-761-5429 Fax: 613-761-4858  
Email: bpclinic@ottawaheart.ca  
Administrative Contact: Bonnie O’Connor

**Appropriate for:** UOHI patients as well as for patients referred from their doctor’s office  
**Hours:** See Hypertension Clinic hours  
**Language:** English, French, also accepts Quebec patients.  
**Cost:** $100.00 (cash or cheque); may be waived depending on individual circumstances  
**Referral:** Fax referral to clinic and inform patient that clinic will contact them with appointment.
Clinic/Program: Ottawa Cardiovascular Centre
502-1355 Bank Street, Ottawa, ON K1H 8K7
Tel: 613-738-1584 Fax: 613-738-9097
E-mail: admin@ottawacvcentre.com
Ottawa Cardiovascular Centre (East)
204-595 Montreal Road, Ottawa, ON K1K 4L2
Tel: 613-749-5421 Fax: 613-749-6621
E-mail: admin@ottawacvcentre.com
Description: Assessment and management of hypertension including the use of ambulatory BP monitoring
Appropriate for: Ambulatory patients referred from their doctor's office
Hours: Mon to Fri: 8:30 a.m. – 4:30 p.m.
Language: English, French
Cost: $100.00
Referral: Download referral form: www.ottawacvcentre.com/OCC_Requisition_Form.pdf. Fax to either location and inform patient that clinic will contact them with appointment.

Clinic/Program: Ambulatory Clinic – Pembroke Regional Hospital
705 Mackay Street, Pembroke, ON K8A 1G8 (Tower C)
Tel: 613-732-3675 ext. 6167 Fax: 613-732-9986
Appropriate for: Ambulatory patients referred from their doctor's office
Hours: Mon to Fri: 7:30 a.m. – 4:30 p.m.
Language: English, French
Cost: No cost
Referral: Fax referral to clinic and inform patient that clinic will contact the physician with appointment.

Clinic/Program: Ambulatory Clinic – Cornwall Cardio-Diagnostic Service
820 McConnell, Room 109, Cornwall, ON K6H 4M4
Tel: 613-933-3572 Fax: 613-933-5320
Description: Outpatient cardiac diagnostic services (Directors: Dr. DeYoung, Dr. Baitz)
Appropriate for: Ambulatory patients referred from their doctor's office
Hours: Mon to Fri: 8:00 a.m. – 4:00 p.m. (closed between 12:00 p.m. - 1:00 p.m.; closes at 2:45 p.m. on Fridays)
Language: English
Cost: $60.00 (cash or cheque only)
Referral: Fax referral form to clinic and contact clinic for appointment.
Clinic/Program: Ambulatory Clinic – Hawkesbury & District General Hospital
1111 Ghislain Street, Hawkesbury, ON K6A 3G5 (Located in the ECG department)
Tel: 613-632-1111 ext. 389 or 1-800-790-8870 ext. 5 Fax: 613-636-6183
Appropriate for: Patients referred from their doctor’s office
Hours: Mon to Fri: 8:00 a.m. - 3:30 p.m.
Language: English, French
Cost: $20.00 (cash or cheque)
Referral: Fax referral and contact ECG department to book appointment.

Clinic/Program: Ambulatory Clinic – Deep River and District Hospital
117 Banting Drive, Deep River, ON (Located in Laboratory Services)
Tel: 613-584-1266 ext. 163 Fax: 613-584-3145
Appropriate for: Patients referred from their doctor’s office
Hours: Mon to Thurs: 7:30 a.m. – 12:00 p.m. and 4:00 p.m. – 6:00 p.m.
Fri: 7:30 a.m. – 12:00 p.m.
Language: English
Cost: No cost
Referral: Fax referral to Laboratory Services and contact ext. 163 to book appointment time.

Clinic/Program: Ambulatory Clinic – Renfrew Victoria Hospital
499 Raglan Street North, Renfrew, ON K7V 1P6 (Located in Ambulatory Clinics)
Tel: 613-432-4851 ext. 832 Fax: 613-433-5723
Appropriate for: Patients referred from their doctor’s office
Hours: Mon to Fri: 8:00 a.m. – 4:00 p.m.
Language: English
Cost: $40.00
Referral: Physician’s office to call for appointment. Ensure that contact information is provided so that results can be mailed to office.
### Community-Based Programs:

<table>
<thead>
<tr>
<th>Clinic/Program</th>
<th>Description</th>
<th>Appropriate for</th>
<th>Hours</th>
<th>Language</th>
<th>Cost</th>
<th>Referral</th>
</tr>
</thead>
</table>
| Blood Pressure/Wellness Clinic  | Blood pressure checks in seniors’ building and/or at community health centres | Seniors                 | 1st Tues of the month: 100 Empress, 9:30 a.m. - 11:30 a.m.  
3rd Wed of the month: 762 Somerset St. W., 11:00 a.m. - 12:00 p.m.  
3rd Wed of the month rotates among: 1041 Wellington St., 865 Gladstone St., 280 Rochester St. 1:30 p.m. - 3:30 p.m.  
3rd Wed of the month: 865 Gladstone, 1:30 p.m. - 3:30 p.m.  
2nd Thurs of the month: 10 Balsam (Italian Club), 1:00 p.m. - 2:00 p.m.  
3rd Mon of the month: 425 Parkdale (Abbeyfield House), 10:30 a.m. - 11:30 a.m. | English, French, Italian | N/A                | None required                                               |
| Chinese Blood Pressure and Wellness Clinic | Blood pressure and wellness checks in seniors’ buildings and community health centres. | Chinese-speaking seniors | 1st Tues of the month: 80 Florence, 10:00 a.m. - 12:00 p.m.  
2nd Tues of the month: Yet Keen Senior Centre, 10:00 a.m. - 12:00 p.m.  
1st Tues of the month: 395 Somerset, 9:00 a.m. - 11:00 a.m.  
4th Thurs of the month: 1041 Wellington alternating with 280 Rochester, 9:30 a.m. - 11:30 a.m.  
2nd Wed of the month: 280 Rochester, 10:00 a.m. - 12:00 p.m. | Cantonese, Mandarin, Vietnamese, English (if needed) | N/A                | None required                                               |
RESOURCES FOR ASSISTING PATIENTS TO ADOPT A HEALTHY DIET

WEBSITES:

Canada's Food Guide was developed according to the latest evidence in nutrient standards and the prevention of chronic disease. A pdf can be downloaded or a print copy can be ordered free of charge.

Heart and Stroke Foundation Dash Diet: www.heartandstroke.ca/dash
An overview of the DASH (dietary approaches to stop hypertension) diet and how to build it into a regular diet

Hypertension Canada: http://www.hypertension.ca/education
Extensive educational tools for health care practitioners have been developed to help educate patients on hypertension and sodium.
Examples of tools available at the above link:
• Beyond the salt shaker; get the facts on sodium
• Healthy eating for your blood pressure
• Dietary sodium; shaking the habit

My BP www.myBPsite.ca
Hypertension Canada has also developed a hypertension association for Canadians with high blood pressure. Signing up and membership is free. Patients are provided with:
• updated and new educational resources,
• a regular newsletter,
• incentives to encourage a healthy lifestyles,
• lectures, and
• possibly, in the future, personalized health care professional advice.
BOOKLETS:
University of Ottawa Heart Institute Heart Healthy Living Guide
http://www.ottawaheart.ca/content_documents/Heart_Healthy_Living_Guide.pdf
This guide contains practical information on managing risk factors, heart healthy diets, and living and working with heart disease.

Hypertension Canada Healthy Eating for Your Blood Pressure
Explains what sodium is and why it can be a problem. Filled with practical tips and “menu makeovers” to help reduce dietary sodium.

Get Your Blood Pressure Under Control Heart and Stroke Foundation: www.heartandstroke.ca
Covers all aspects of blood pressure management including sodium reduction.

WORKSHOPS:
University of Ottawa Heart Health Nutrition Workshops: http://www.ottawaheart.ca/calendar.htm
Participants get the facts on fat, cholesterol, fiber and salt and develop skills for heart healthy eating to help reduce or control blood cholesterol and improve the health of their arteries. To register please call 613-761-4753 or 1-866-399-4432 For patients outside Ottawa, a telehealth connection can be arranged. The patient can listen and view the workshop at a nearby hospital.

Peak Performance: www.peakperformance.on.ca
Coping with Cholesterol – Eat Smart Workshop: Cost $30/person
Do you have elevated cholesterol or blood pressure? This workshop has all the nutrition information to get started on a heart healthy diet. It helps participants get started on a nutrition plan to better cope with elevated blood pressure and weight loss. This workshop reviews how to stay heart healthy and delves into which foods should be eaten.

DIETITIANS:
For advice or individual nutrition counselling, find a Dietitian through Dietitians of Canada website http://www.dietitians.ca/Find-A-Dietitian/ or speak directly to a Dietitian through the Ontario Provincial Call Centre: toll free 1-877-510-5102 Monday to Friday 9:00 a.m. to 5:00 p.m. Eastern Time (ET). Evening hours are Tuesday and Thursday to 9:00 p.m. ET
CHOLESTEROL/ DYSLIPIDEMIA


Is patient?:
- Male ≥40;
- Female ≥50 or post-menopausal;
- Adult of any age with CVD risk factors;
- Diagnosed CAD, PVD, TIA/ Stroke, Diabetes, CKD

YES

Fasting (9h) Blood Lipids (Total Cholesterol, LDL-C, HDL-C, Triglycerides, non HDL-C (TC- HDL-C), TC/HDL-C Ratio

YES

Does patient have known?: CAD; PVD; Stroke/ TIA; Diabetes Mellitus; CKD

NO

Risk Stratify Patient
See Framingham Risk Score for Total CVD + adjust for family history of CVD in 1° family member < 60-years of age

High Risk (≥20% 10-year Risk)
Treat immediately to target:
1° target: LDL-C < 2.0 mmol/L or lower LDL-C by at least 50%
2° target: non-HDL-C ≤ 2.6 mmol/L

Moderate Risk (10 – 19% 10-year Risk)
Treat when: LDL-C ≥ 3.5 mmol/L or TC/HDL-C ≥ 5.0 or apoB ≥ 115 g/L or non-HDL-C ≥ 4.3 mmol/L
1° target: LDL-C < 2.0 mmol/L or lower LDL-C by at least 50%
2° target: non-HDL-C < 2.6 mmol/L or apoB < 0.8 g/L

Low Risk (<10% 10-year Risk)
Treat when: LDL-C ≥ 5.0 mmol/L or TC/HDL-C > 6.0
1° target: LDL-C < 2.0 mmol/L or lower LDL-C by at least 50%
2° target: non-HDL-C < 2.6 mmol/L or apoB < 0.8 g/L

When treatment decisions are uncertain, additional investigations may serve to clarify risk status:
- Lp(a), hsCRP, urinary albumin/creatinine ratio (UACR), and, if ↓ plasma glucose, HbA1c
- Graded exercise stress testing
- Non-invasive assessment of atherosclerosis: carotid imaging, ankle-brachial index, coronary artery calcium score (CAC)

TREATMENT

MEDICATION
At start of treatment baseline ALT and CK:
Medication
- Statin monotherapy
If unable to achieve 1° target:
- Consider niacin or ezetimibe or bile acid sequestrant
If triglycerides are > 10 mmol/L:
- Intensify lifestyle therapy
- Consider combination statin with niacin or fibrate
- Add omega-3 DHA/EPA or salmon oil 2 g BID

LIFESTYLE
Encourage all individuals to adopt a healthy lifestyle:
Smoke-free
Adopt healthy eating habits:
- Limit intake of saturated and trans fatty acids, simple sugars, refined carbohydrates; and,
- Emphasize a diet rich in vegetables, fruit, whole grain cereals, and polyunsaturated and monounsaturated oils, including omega-3 fatty acids.

Achieve a healthy weight:
- BMI < 25 kg/m²; at minimum, < 27 kg/m²
- Waist circumference < 94 cm (37”) for men & < 80 cm (31.5”) for women

Engage in regular physical activity:
- 60 min of light, 30 – 60 min of moderate exercise 4 – 7 days/ week

Follow-up: Repeat fasting lipids, ALT, and CK 1 - 4 months and adjust medication accordingly.
Repeat in 6 - 12 months and only 12 months once targets are achieved. Repeat measures of ALT and CK are not necessary for the majority of patients on a stable therapeutic regimen.

Specialty Clinic Referrals – Patient should be referred to specialty clinic if:
- Multiple metabolic co-morbidities
- Failure to achieve targets
- Severe monogenic dyslipidemia
WAIST CIRCUMFERENCE TARGETS FOR PATIENTS WITH DYSLIPIDEMIA

Waist circumference targets for management of dyslipidemia are more stringent than other recommendations because of the strong correlation between BMI, subcutaneous abdominal fat, and coronary atherosclerosis and are therefore considered of particular importance in the management of dyslipidemia.

LIPID LOWERING MEDICATIONS:

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Trade Name</th>
<th>Dose Range</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Statins</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atorvastatin</td>
<td>Lipitor</td>
<td>10-80 mg</td>
<td>• Generally well tolerated</td>
</tr>
<tr>
<td>Fluvastatin</td>
<td>Lescol</td>
<td>20-80 mg</td>
<td>• Significant increases in hepatic transaminase levels, defined as alanine aminotransferase (ALT) levels more than 3 times upper limit of normal occur in 0.3% - 2.0% of patients and are generally dose-related. Although underlying liver disease in considered a contraindication to statin therapy, there is no evidence of worsening of liver function in subjects with fatty liver, chronic hepatitis C, or primary biliary cirrhosis treated with statins – measure ALT at baseline, and between 1 and 3 months after initiating statin or niacin therapy</td>
</tr>
<tr>
<td>Lovastatin</td>
<td>Mevacor</td>
<td>20-80 mg</td>
<td>• Statin-induced myopathy is a well-established but rare side-effect. The incidence of myalgia is approximately 3 – 4% in statin-treated patients vs. 2% in placebo-treated individuals.</td>
</tr>
<tr>
<td>Pravastatin</td>
<td>Pravachol</td>
<td>10-40 mg</td>
<td>• Statin induced myositis (muscle discomfort + CK &gt;10 times normal limit) occurs in &lt; 0.1% of treated patients and requires prompt discontinuation of drug therapy; patients at most risk are elderly and/or multiple co-morbidities.</td>
</tr>
<tr>
<td>Rosuvastatin</td>
<td>Crestor</td>
<td>5-40 mg</td>
<td>• In high risk patients, CK levels at baseline and advise to stop medication if significant symptoms develop.</td>
</tr>
<tr>
<td>Simvastatin</td>
<td>Zocor</td>
<td>10-40 mg</td>
<td>• Use lower dose ranges in persons of south and East Asian origin.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>Bile Acid and/or Cholesterol Absorption Inhibitors</strong></th>
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<tbody>
<tr>
<td>Cholestyramine</td>
<td>Questran 2 - 24 g</td>
</tr>
<tr>
<td>Colestipol</td>
<td>Colestid 5 - 30 g</td>
</tr>
<tr>
<td>Lodelis</td>
<td>Colesevelam 625 mg x 6 tabs/day</td>
</tr>
<tr>
<td>Ezetimibe</td>
<td>Ezetrol 10 mg</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>Fibrates</strong></th>
<th></th>
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<tbody>
<tr>
<td>Bezafibrate</td>
<td>Bezalip 400 mg</td>
</tr>
<tr>
<td>Gemfibrozil</td>
<td>Lopid 600 - 1200 mg</td>
</tr>
<tr>
<td>Fenofibrate</td>
<td>Lipidil Micro 100 - 200 mg, 160 mg, 145 mg</td>
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<table>
<thead>
<tr>
<th><strong>Niacin</strong></th>
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</thead>
<tbody>
<tr>
<td>Nicotinic acid</td>
<td>Crystalline 1 - 3 g</td>
</tr>
<tr>
<td>Ext. release *Niaspan-FCT</td>
<td>0.5 - 2 g</td>
</tr>
</tbody>
</table>

• The over-the-counter preparations of slow-release niacin are not recommended since they are commonly associated with elevated transaminase levels, particularly if administered in multiple doses over the course of the day. Crystalline niacin and extended release niacin preparations are much safer but may result in persistent significant elevations in ALT in approximately 1% of patients. A general recommendation is to measure ALT levels at baseline, and between 1 and 3 months after initiating niacin therapy. |
• Niacin can impair insulin sensitivity and may raise blood glucose levels in susceptible individuals in a dose dependent fashion, although this effect may be transient. Studies using niacin in combination with a statin have shown beneficial effects in reducing atherosclerosis progression in people with Diabetes. In patients with diabetes or glucose intolerance, initiate niacin therapy at 500 – 1000 mg per day and monitor glycemic control. |
• Niacin causes flushing which can be helped by pre-administration of aspirin, nocturnal dosing, and gradual titration up to recommended dose. |
• Niacin may also cause gastric upset.
## COMMUNITY RESOURCES - CHOLESTEROL
### SPECIALITY CLINICS/PROGRAMS

| Clinic/Program: | **University of Ottawa Heart Institute Lipid Clinic**  
40 Ruskin Street, Ottawa, ON K1Y 4W7  
Tel: 613-761-5257 Fax: 613-761-4676  
Director: Dr. Ruth McPherson |  
| **Description:** | The focus of the Lipid Clinic is to diagnose and treat metabolic risk factors which contribute to cardiovascular disease. Of particular importance are cholesterol, triglycerides, Diabetes, obesity, and hypertension. |  
| **Appropriate for:** | Persons with documented elevated cholesterol/ lipids and/ or Diabetes; persons with strong family history plus risk factors |  
| **Hours:** | Mon & Fri: 8:00 a.m. - 12:00 p.m. |  
| **Language:** | English, French |  
| **Cost:** | N/A |  
| **Referral:** | Physician must call clinic to request appointment. Information required: patient history and demographics, most recent blood tests, family physician name and billing #. Clinic will notify family physician’s office of appointment date and time. Family physician’s office must notify patient. Tell patient to expect a letter and blood test requisitions in the mail from clinic a few weeks before scheduled appointment. |  

| Clinic/Program: | **Foustanellas Endocrine and Diabetes Centre Lipid Clinic**  
The Ottawa Hospital  
Riverside Campus, 4th Floor, 1967 Riverside Drive, Ottawa, ON  
Tel: 613-738-8400 ext. 88333 Fax: 613-738-8261  
Director: Dr. TC Ooi |  
| **Description:** | This multidisciplinary lipid clinic provides individual nutrition counselling and medical management to people with lipid disorders. |  
| **Appropriate for:** | All patients with primary or secondary lipid disorders including those with diabetes related and renal dyslipidemias |  
| **Hours:** | Mon to Fri: 8:00 a.m. - 5:00 p.m.  
Telephone is answered between 8:30 a.m. - 11:30 a.m. and 1:30 p.m. - 4:15 p.m. |  
| **Language:** | English, French |  
| **Cost:** | N/A |  
| **Referral:** | Physician referral required. Fax referral to clinic, include reason for referral, recent lab work and medication list. For Physicians: on referral, please include fasting glucose, lipid profile, TSH, creatinine and medication previously tried. |
Clinic/Program: Ottawa Cardiovascular Centre
502-1355 Bank Street, Ottawa, ON K1H 8K7
Tel: 613-738-1584 Fax: 613-738-9097
E-mail: admin@ottawacvcentre.com

Ottawa Cardiovascular Centre (East)
204-595 Montreal Rd., Ottawa, ON K1K 4L2
Tel: 613-749-5421 Fax: 613-749-6621
E-mail: admin@ottawacvcentre.com
Director: Dr. Joel Niznick
Admin. Manager: May Moloughney

Description: Prompt access to comprehensive cardiovascular consultation, diagnosis, and follow up care.
Appropriate for: Patients who require assessment and management of hypertension and hyperlipidemia
Hours: Mon to Fri: 8:30 a.m. - 4:30 p.m. with telephones answered from 9:00 a.m. - 12:00 p.m. and 1:00 p.m. - 4:00 p.m.
Language: English, French
Cost: N/A
Referral: Download and complete referral form: www.ottawacvcentre.com/OCC_Requisition_Form.pdf. Fill out the form and fax it to either location. Inform patient that the clinic will contact them with appointment.

Clinic/Program: Queensway-Carleton Endocrinology Clinic
3045 Baseline Rd., Ottawa, ON K2H 8P4
Tel: 613-721-2000 ext. 3763 Fax: 613-721-4787
Contact: Sharron Rouatt

Description: Appointment with endocrinologist for lipid disorder. Program is not specifically a lipid clinic.
Appropriate for: Patients with lipid disorder
Hours: Varies
Language: English, French
Cost: N/A
Referral: Call clinic for appointment time and fax referral request; include purpose of referral and most recent relevant lab work. Clinic provides appointment time to family doctor's office. Family doctor must contact patient with appointment time and date.

Clinic/Program: Winchester District Memorial Hospital
566 Louise St., Winchester, ON K0C 2K0
Tel: 613-774-2422 ext. 6760

Description: The Clinical Nutrition Department/ Diabetic Education Program holds classes for individuals with elevated cholesterol and/ or at risk for heart disease.
Appropriate for: Individuals with elevated cholesterol or at risk for CVD
Hours: Mon to Fri: 8:00 a.m. - 4:00 p.m. (Evening classes 3 days/ month – call for class times). Satellite program for seniors (Senior Support Centre – call for information)
Language: English
Cost: N/A
Referral: Self referral, physician referral, or other health care provider referral
EDUCATION/ LIFESTYLE PROGRAMS:

Workshop:  **Coping with Cholesterol Series**  
Lipid Clinic  
University of Ottawa Heart Institute  
40 Ruskin Street, Ottawa, ON  
Tel: 613-738-2384  
E-mail: bmansfield@ottawaheart.ca  
Website: www.peakperformance.ca  
Contact: Beth Mansfield, Registered Dietitian  

**Description:** Educational series delivered by Beth Mansfield.

- **Eat Smart ($30/p):** Get intelligent advice about sensible eating to lower LDL-cholesterol and triglycerides. Learn the principles of heart healthy eating to achieve your peak health.
- **Shape Up ($50/p):** Develop a weight loss plan of action for increasing HDL-cholesterol and lowering LDL-cholesterol and triglyceride levels. Get an individual body composition/ resting metabolic rate test and learn how to adjust your energy balance to achieve a healthy weight goal.

**Appropriate for:** Patients with elevated cholesterol levels.

**Hours:** Saturday mornings  
**Language:** English  
**Cost:** $30 to $50  
**Referral:** Registration required by telephone

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Workshop:  **Heart Delicious Nutrition Workshops**  
Prevention and Wellness Centre (PWC)  
University of Ottawa Heart Institute  
40 Ruskin Street, Ottawa, ON. K1Y 4W7  
Tel: 613-761-4753 or 1-866-399-4432 Fax: 613-761-5309  

**Description:** These are interactive workshops facilitated by a registered dietitian.

- **ABCs to Heart Healthy Eating:** Develop the skills for heart healthy eating to reduce or control your blood cholesterol. Learn how to read food labels and get the facts on fat, cholesterol, fiber and salt.
- **Heart Healthy Eating with Diabetes:** Get the lowdown on meal planning, managing your diabetes and heart healthy eating. For people wishing to control or prevent diabetes.
- **French Workshop – Healthy Eating from A to Z:** Offered only in French. Learn how to read food labels and get the facts on fat, cholesterol, fiber and salt.
- **Nutrition Tips for Weight Management:** Learn to set realistic goals for healthy weight management. Acquire the skills to develop balanced meals, portion sizes and techniques for weight loss and maintenance.

**Appropriate for:** Patients and members of the public who are interested in learning about heart healthy eating.

**Hours:** Refer to schedule online or contact PWC for details.

**Language:** English, French  
**Cost:** Free, unless specified  
**Referral:** Registration required by telephone
Workshop: **Cholesterol Class**  
Renfrew Victoria Hospital Dietary Department  
499 Raglan St. North, Renfrew, On K7V 1P6  
Telephone: 1-613-432-4851 ext. 230  

**Appropriate for:** Individuals with high cholesterol levels.  
**Hours:** Classes are held once per month at 2:00 p.m.  
**Language:** English  
**Cost:** N/A  
**Referral:** No clinician referral required

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Workshop: **Nutrition Class**  
Pembroke Regional Hospital  
705 Mackay St., Pembroke, ON, K8A 1G8  
Telephone: 1-613-732-2811 ext. 6151  

**Description:** The topics covered include: The definition of lipids; target lab values; Canada's Food Guide; good fats & bad fats; sodium, fibre, portion sizes, eating out, alcohol, label reading shopping, activity, and healthy body weight.  

**Appropriate for:** Individuals with high cholesterol levels.  
**Hours:** Classes are held once per month at 1:00 p.m. and 6:00 p.m.  
**Language:** English  
**Cost:** N/A  
**Referral:** No clinician referral required.

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Workshop: **Eating For A Healthy Heart**  
Deep River and District Hospital, Erica (dietitian)  
117 Banting Drive, RR#1, Deep River, ON, K0J 1P0  
Telephone: 1-613-584-3333 ext. 313  
Email: ericav@drdh.org

**Appropriate for:** Individuals with high cholesterol levels.  
**Hours:** 1:00 p.m. to 2:30 p.m  
**Language:** English  
**Cost:** N/A  
**Referral:** No clinician referral required.
DETECTION, MONITORING & REFERRAL OF CHRONIC KIDNEY DISEASE (CKD)

Source: Algorithm developed by Akbari A, Karpinski J, Bell R, Magner P. The algorithm is based on the Canadian Society of Nephrology (CSN), 2006. Position Paper - Care and Referral of Adult Patients with Reduced Kidney Function. 17

Identify patients in your practice with elevated risk of CKD:
- Patients with hypertension
- Patients with diabetes
- Family history of end stage (Class V) renal disease
- Patients with autoimmune disease
- Patients with vascular disease
- Patients with unexplained anemia
- Patients with Heart failure
- First Nations Peoples
- Patients with edema

Screen with eGFR and albumin to creatinine ratio in urine (ACR).
If eGFR <60 and/ or ACR >60, repeat them in 2 to 4 weeks. Then if:

<table>
<thead>
<tr>
<th>eGFR &lt;30 and/ or ACR &gt;60</th>
<th>eGFR 30-60 and ACR &lt;60</th>
<th>eGFR &gt;60 and ACR &lt;60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workup:</td>
<td></td>
<td>Individual follow up and treatment</td>
</tr>
<tr>
<td>Urinalysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrolytes &amp; Ca</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasound</td>
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</tr>
</tbody>
</table>

If:
- eGFR falling >20% per year (progressive decline)
- Failure to achieve Rx targets

Unremarkable:
- Manage as per guidelines (below)
- Follow eGFR & ACR every 6 months
- Consider giving patient CKD brochure

Stable ACR and eGFR for 2 years, follow every 12 months

Refer to nephrology with:
- Urinalysis, ACR, ultrasound, CBC, electrolytes, Ca, PO4, albumin

Implement measures to modify CV risk factors
- Lifestyle modification, smoking cessation
- Consider ASA 81 mg daily for secondary prevention in patients with CVD
- Treat cholesterol to target as per other CVD risk factors
- In diabetics, optimize blood sugar control

Minimize further kidney injury
- If possible, avoid nephrotoxins such as NSAIDs, aminoglycosides, IV and intra-arterial contrast, etc. (if eGFR <60)
- If contrast is necessary, consider prophylactic measures (if eGFR <60)

Treatment targets: implement measures to slow rate of CKD progression
- Treat to target BP <140/90
- Target urine albumin/creatinine ratio <40
- ACEI or ARB are first line therapies in patients with albuminuria or proteinuria (monitor K and Cr or eGFR)
COMMUNITY RESOURCES - CHRONIC KIDNEY DISEASE

Clinic/Program: **Jindal Kidney Care Centre**
5th Floor, Riverside Campus
1967 Prom. Riverside Dr., Ottawa, Ontario K1H 7W9
Tel: 613-738-8207 Fax: 613-738-8384

Description: The Jindal Kidney Care Centre provides care to adults with all forms of Kidney Disease. The goal is to serve patients as close to their homes as possible.

Appropriate for: Patients and their families in Ottawa and the surrounding regions.

Hours: Mon to Fri: 7:30 a.m. - 5:00 p.m. Telephone is answered between 8:00 a.m. to 4:30 p.m.

Language: English, French

Cost: N/A

Referral: Please follow referral guidelines below. Referral must be faxed to Nephrology Clinic. Once referral is received, it is reviewed by the Nephrologist on call and triaged.

**Guidelines for referral to Jindal Kidney Care Centre:**

- Patients should be referred to a nephrologist for:
  - eGFR less than 30 ml/min/1.73m²
  - Declining eGFR at a rate of more than 20% per year
  - Significant proteinuria: urine albumin to creatinine ratio (ACR) more than 60 g/mol
  - Failure to achieve treatment targets

- When faxing referral, include results of:
  - Urinalysis, ACR, Ultrasound of kidney, CBC, electrolytes, Ca, PO₄, albumin, and all creatinines

**Patient Education Brochure:** Patient education brochures are available for patients with Stable Non-proteinuric (ACR <60) Chronic Kidney Disease. Brochures are available in French and English; please contact 613-738-8400 Ext. 82700 to request more brochures. They will be mailed to you free of cost.

**Wallet Cards:** Wallet cards that provide medication advice for kidney patients or that provide information on issues in patients with chronic kidney disease are also available and can be requested from the same number.

NOTES
SMOKING CESSATION


### ASK - Document Tobacco Use Status in Patient Medical Record (5th Vital Sign)

- “Have you used any form of tobacco in past 7-days?”
- “Have you used any form of tobacco in the past?”

### ADVISE - Strong, Clear, Personalized Advice to Quit with Offer of Support

(Non-judgmental, Non-confrontational)

- “As your doctor, the most important advice I can give you is to quit smoking.”
- “I know quitting smoking can be difficult. I can help you to quit.”

### ASSESS - Readiness to Quit + Tobacco Use History (optional)

- “Are you ready to quit smoking in the coming weeks?”
- “Are you willing to try to quit at this time?”

**Document in Patient Medical Record**

#### Ready to Quit

- **Quit Plan Consult**
  1. Brief Tobacco Use History
  2. Set Quit Date
  3. Prescribe First Line Pharmacotherapy (See titration guidelines)
  4. Provide Tactical Advice
     - Reinforce decision to quit
     - Review use of medication
     - Reduce caffeine intake by 50%
     - Address cravings/withdrawal
     - Discuss smoking triggers and routines
     - Avoid other smokers and situations which you would be tempted to smoke in early weeks
  5. Arrange Follow-up in 2-4 weeks or refer to available cessation programs (see list)

**Use University of Ottawa Heart Institute Smoking Cessation Consult Form for Documentation (Print/EMR)**

#### Not Ready to Quit

- **Option 1: Reduce to Quit**
  - “I understand you’re not ready to quit. Would you be willing to cut back on the amount you smoke in the coming weeks?”
  - Strategic Advice to Cut Back on Number of Cigarettes each Week
  - Prescribe First Line Pharmacotherapy
  - Agree to Follow-up Plan

- **Option 2: Brief Intervention**
  - “I am not going to nag you about quitting. When you are ready to quit I am here to provide you support.”
  - Reinforce importance of quitting
  - Repeat offer of support when ready

**Ask Strategic Questions**

- “What are your concerns about quitting?”
- “Can you think of some benefits to quitting?”
- Address roadblocks

### ACT

- **ACT (K039, Q042)**
  - 8-15 mins

- **Arrange Follow-up - 2-4 weeks or 8-10 weeks following quit date, as required thereafter**
  - Brief Assessment of Treatment Plan
  - Tobacco use, Cravings, Withdrawals, Side effects, Mood, Confidence
  - Adjust medication as required (Titrate, Combine, Extended Use)
  - Develop relapse plan
  - Reinforce any success/importance of quitting
  - Agree to required follow-up

**Use University of Ottawa Heart Institute Smoking Consult Form for Documentation (Print/EMR)**
## SUPPLEMENTAL INFORMATION
### OHIP BILLING CODES FOR SMOKING CESSATION

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
<th>Frequency</th>
<th>Instructions</th>
<th>Amount</th>
</tr>
</thead>
</table>
| E079   | Initial Smoking Cessation Counselling Dialogue                       | Once every 12 months                         | 1. Medical record must document an initial smoking consult using a flow sheet consistent with 5As model for smoking cessation (CTI form or other flow sheet)  
2. Only eligible for payment when rendered in conjunction with one of the following services: A001, A003, A004, A005, A006, A007, A008, A903, A905, K005, K007, K013, K017, P003, P004, P005, P008, W001, W002, W003, W004, W008, W010, W102, W104, W107, W109 or W121. | $15.40  |
| K039   | Smoking Cessation Counselling                                       | Twice in the 12 months following the billing of E079 | 1. The medical record for this service must document that a follow-up visit regarding smoking cessation has taken place, by either completion of a flow sheet or other documentation consistent with the most current guidelines of the “Clinical Tobacco Intervention” (CTI) program, or the service is not eligible for payment.  
2. K039 is only eligible for payment when E079 is payable to the same physician in the preceding 12 month period. | $33.45  |
| Q042   | Smoking Cessation Counselling (Bonus Code for FHG, FHN, FHTs, FHOs) | Billed in conjunction with K039 Twice in 12 months following E079 | For physicians in payment enrolment models only.  
May be billed in conjunction with K039 or A007A when service is provided to an enrolled patient.  
Eligible for 3% General Fee Payment (2008 Physician Services Agreement, services rendered Oct 1 2008 – Sept 30 2009) | +$7.50  |
| A007 and/or K013 | Ongoing Follow-up Counselling | A007 – unlimited K013 – 3 times per year, min 20 minutes | Counselling Counselling | $31.95 |
ONTARIO DRUG BENEFIT (ODB) COVERAGE FOR SMOKING CESSATION MEDICATIONS (NEW SEPTEMBER 2011)

<table>
<thead>
<tr>
<th>Product</th>
<th>Produce Code</th>
<th>Reason for Use Code</th>
<th>Clinical Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varenicline Tartrate (Champix)</td>
<td>02298309</td>
<td>423</td>
<td>For smoking-cessation treatment in adults, in conjunction with smoking cessation counseling.</td>
</tr>
<tr>
<td>0.5 mg &amp; 1.0mg Tabs</td>
<td>PFI 42.1300</td>
<td></td>
<td>Network Note: Limited to 12 weeks (168 tablets) of reimbursement per 365 days per patient</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>LU Authorization Period: 12 weeks</td>
</tr>
<tr>
<td>Bupropion HCL (Zyban)</td>
<td>02238441</td>
<td>423</td>
<td>For smoking-cessation treatment in adults, in conjunction with smoking cessation counseling.</td>
</tr>
<tr>
<td>150 mg SR Tab</td>
<td>Val 0.9228</td>
<td></td>
<td>Network Note: Limited to 12 weeks (168 tablets) of reimbursement per 365 days per patient</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>LU Authorization Period: 12 weeks</td>
</tr>
</tbody>
</table>

WHO CAN BENEFIT FROM ODB?
• People 65 years of age and older
• Residents of long-term care homes
• Residents of homes for special care
• People receiving professional services under the Home Care program
• Trillium Drug Program registrants
• People receiving social assistance are also eligible for ODB coverage

THE ODB PROGRAM AUTOMATICALLY PAYS IF THE DRUGS ARE PURCHASED:
• In an accredited Ontario pharmacy that is on-line with the ministry's Health Network System; or
• From an Ontario doctor licensed to sell prescription drug products who is on-line with the ministry's Health Network System
Note: Prescription drugs purchased outside Ontario are not reimbursed by the ODB program.
# Efficacy of First Line Monotherapy and Combination Therapy


<table>
<thead>
<tr>
<th>Pharmacotherapy</th>
<th>Estimated OR (95% CI)</th>
<th>Estimated Abstinence Rate (95% CI)</th>
<th>Cost Per Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo</td>
<td>1.0</td>
<td>13.8</td>
<td>-</td>
</tr>
<tr>
<td><strong>Mono-therapies</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Varenicline</td>
<td>3.1 (2.5-3.8)</td>
<td>33.2 (28.9-37.8)</td>
<td>$33-$36</td>
</tr>
<tr>
<td>Bupropion</td>
<td>2.0 (1.8-2.2)</td>
<td>24.2 (22.2-26.4)</td>
<td>$15-$21</td>
</tr>
<tr>
<td>Nicotine Patch</td>
<td>1.9 (1.7-2.2)</td>
<td>23.4 (21.3-25.8)</td>
<td>$25-$30</td>
</tr>
<tr>
<td>High Dose Patch</td>
<td>2.3 (1.7-3.0)</td>
<td>26.5 (21.3-32.5)</td>
<td>$20-$32</td>
</tr>
<tr>
<td>Nicotine Inhaler</td>
<td>2.1 (1.5-2.9)</td>
<td>24.8 (19.1-31.6)</td>
<td>$20-$40</td>
</tr>
<tr>
<td>Nicotine Gum</td>
<td>1.5 (1.2-1.7)</td>
<td>19.0 (16.5-21.9)</td>
<td>$13-$24</td>
</tr>
<tr>
<td><strong>Combined Therapy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patch + Inhaler</td>
<td>2.2 (1.3-2.6)</td>
<td>25.8 (17.3-36.5)</td>
<td>$40-$60</td>
</tr>
<tr>
<td>Patch + Gum</td>
<td>2.6 (2.5-5.2)</td>
<td>26.5 (28.6-45.3)</td>
<td>$40-$60</td>
</tr>
<tr>
<td>Patch (long-term; &gt; 14 weeks) + ad lib short acting NRT</td>
<td>3.6 (2.5-5.2)</td>
<td>36.5 (28.6-45.3)</td>
<td>$40-$60</td>
</tr>
<tr>
<td>Patch + Bupropion</td>
<td>2.5 (1.9-3.4)</td>
<td>28.9 (23.5-25.1)</td>
<td>$25-$50</td>
</tr>
</tbody>
</table>
### Varenicline (Champix)

<table>
<thead>
<tr>
<th>Days 1-3: 0.5 mg daily</th>
<th>Instructions for Use</th>
<th>Contraindications / Precautions</th>
<th>Possible Side Effects (Frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days 4-7: 0.5 mg BID</td>
<td>Begin taking varenicline 14 to 8 to 35 days before quit date.</td>
<td>Contraindications:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Take the pill after a meal with a full glass of water.</td>
<td>• Pregnant or breast feeding</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Do not engage in potentially hazardous tasks, such as operating machinery, until you are sure this medication does not affect your mental alertness.</td>
<td>• Under the age of 18 years</td>
<td></td>
</tr>
<tr>
<td></td>
<td>If patient or family notice agitation, depressed mood, or changes in behavior that are not typical for patient, or an allergic reaction, advise patient to stop taking the medication immediately and contact health care provider without delay.</td>
<td>• Previous drug reaction to Varenicline</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“For patients with a partial response to initial medication therapy (ie, a decreased smoking rate but not abstinence from smoking), further tailoring of the medication regimen may be necessary to reach the desired therapeutic goal of smoking abstinence. For example, if a patient has reduced smoking using varenicline at a dose of 1 mg twice daily and has tolerated the medication without substantial nausea, we may increase the dose to 1 mg taken 3 times daily.” According to Hurt &amp; al., 2009.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weeks 2-12: 1 mg BID</th>
<th>Precautions:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Patient is using Nicotine Replacement Therapy in addition to Varenicline (use recommended only when mono-therapy is ineffective in achieving cessation). (Hurt &amp; al., 2009).</td>
</tr>
<tr>
<td></td>
<td>• Impaired Renal Function:</td>
</tr>
<tr>
<td></td>
<td>- Mild to Moderate Renal Impairment: No adjustment is necessary.</td>
</tr>
<tr>
<td></td>
<td>- Severe Renal Disease (estimated Creatinine clearance &lt; 30ml/min or eGFR15 = 29mls/min/1.73m²): Recommended dosing is 0.5 mg once daily for the first 3 days then increased to 0.5 mg twice daily.</td>
</tr>
</tbody>
</table>

|                        | Nausea (30%); breakdown below: |
|                        |   - mild (28.1%) |
|                        |   - moderate (71.4%) |
|                        |   - severe (2%) |
|                        | • Vivid/Abnormal dreams (15%) |
|                        | • Headache (15.5%) |
|                        | • Dizziness (0.7%) |
|                        | • Constipation (5.4%) |
|                        | • Flatulence (5.7%) |
|                        | • Allergic reaction (rare) |
|                        | • Altered/depressed mood (2.8%) |

**Strategies to address side effects:**

- Nausea
  - Take with full glass of water and meal
  - Take at least 8 hours apart
  - Use over the counter antinauseant
  - Reduce dose
  - Discontinue for severe nausea

- The dosage can be down titrated to address side effects.

- Monitor mood at all follow-up appointments.

**BUPROPION (ZYBAN)**

<table>
<thead>
<tr>
<th>Treatment Plan</th>
<th>Instructions for Use</th>
<th>Contraindications / Precautions</th>
<th>Possible Side Effects (Frequency)</th>
</tr>
</thead>
</table>
| Days 1-3: 150 mg/ daily | • Begin taking bupropion 8-14 days before your quit date.  
• Ensure at least 8 hours between doses.  
• If patient or family notice agitation, depressed mood, or changes in behavior that are not typical for patient, advise patient to stop taking the medication immediately and contact health care provider without delay. | **Contraindications:**  
• Pregnant or breast feeding  
• Seizure disorder or a history of head trauma  
• Presently taking Bupropion/Wellbutrin  
• Previous reaction to Zyban or Wellbutrin  
• Pre-existing or current eating disorder (bulimia, anorexia nervosa)  
• Recent history of excessive use of alcohol/sedatives present or past  
• Taking anti-depressants, antipsychotics, corticosteroids, MAO inhibitors, theophylline, cocaine or diet pills  
• Taking a quinolone antibiotic eg. ciprofloxacin, levofloxacin  
• Severe hepatic impairment  
**Precautions:**  
• Taking oral hypoglycemic medications or insulin  
• Patient has central nervous system tumor | • Dry mouth  
• Difficulty sleeping  
• Nausea  
• Constipation  
• Shakiness  
• Altered taste  
• Anxiety  
• Palpitations  
• Seizures (rare) |
| Day 4-Week 12: 150 mg BID | | **Strategies to address side effects:**  
• The dosage can be adjusted to 150mg/daily to address side effects.  
• Monitor mood at all follow-up appointments. |
### NICOTINE REPLACEMENT THERAPY (NRT)

Standard on package NRT dosing will be insufficient for 50-60% of patient who smoke.

<table>
<thead>
<tr>
<th>Number of Cigarettes You Smoke Per Day</th>
<th>Recommended Treatment Plan</th>
<th>Instructions</th>
<th>Possible Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Less than 10</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If you smoke within 30 minutes of waking in the morning, increase to next dose</td>
<td>Use one 7 mg nicotine patch daily for weeks 1 - 6</td>
<td>Apply the patch to a clean, dry, non-hairy area on the upper part of your body (arms, chest, back) &amp; 6: Replace the patch with a new one every 24 hours</td>
<td>Headache</td>
</tr>
<tr>
<td></td>
<td>Consider combining with gum, lozenge, inhaler or mouth spray during weeks 1-6 or longer</td>
<td>Be sure to remove the old patch before putting on a new one</td>
<td>Trouble sleeping</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dizziness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Nausea</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin irritation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stomach upset</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>10-19</strong></td>
<td>Use one 14 mg nicotine patch daily for weeks 1 - 6, then</td>
<td>Use one 7 mg nicotine patch daily for weeks 7 - 10 or longer</td>
<td>Headache</td>
</tr>
<tr>
<td>If you smoke within 30 minutes of waking in the morning, increase to next dose</td>
<td></td>
<td></td>
<td>Trouble sleeping</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dizziness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Nausea</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin irritation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stomach upset</td>
</tr>
<tr>
<td><strong>20-29</strong></td>
<td>Use one 21 mg nicotine patch daily for weeks 1 - 6, then</td>
<td>Use one 14 mg nicotine patch daily for weeks 7 &amp; 8, then</td>
<td>Headache</td>
</tr>
<tr>
<td>If you smoke within 30 minutes of waking in the morning, increase to next dose</td>
<td>Use one 7 mg nicotine patch daily for weeks 9 &amp; 10 or longer</td>
<td>Use one 7 mg nicotine patch daily for weeks 9 &amp; 10 or longer</td>
<td>Trouble sleeping</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dizziness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Nausea</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin irritation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stomach upset</td>
</tr>
<tr>
<td><strong>30-40</strong></td>
<td>Use two nicotine patches (21 mg + 7 mg) daily for weeks 1 - 6, then</td>
<td>Use one 21 mg nicotine patch daily for weeks 7-10, then</td>
<td>Headache</td>
</tr>
<tr>
<td></td>
<td>Use one 21 mg nicotine patch daily for weeks 7-10, then</td>
<td>Use one 14 mg nicotine patch daily for weeks 11 &amp; 12, then</td>
<td>Trouble sleeping</td>
</tr>
<tr>
<td></td>
<td>Use one 7 mg nicotine patch daily for weeks 13 &amp; 14 or longer</td>
<td>Use one 7 mg nicotine patch daily for weeks 13 &amp; 14 or longer</td>
<td>Dizziness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Nausea</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin irritation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stomach upset</td>
</tr>
</tbody>
</table>

**Managing cravings**
- It is recommend to use short-acting NRT (i.e. inhaler, gum, lozenge or mouth spray) as needed to manage cravings and withdrawal. These are safe to use in combination with the patch.
- If after 24 hours of starting NRT you are still experiencing moderate to severe cravings you can add another 7 mg patch or consult with your quit smoking follow-up support, family doctor, or pharmacist.

**Strategies to Address Side Effects:**
- **Difficulty Sleeping** Remove nicotine patch at bedtime. We suggest reapplying patch 45-60 minutes before waking (set alarm).
- **Skin Irritation** Try changing where you apply the patch each day, use clear patch, or use topical cortisone cream.

Cost Per Unit $20 - $32
(As sold) for 7-day supply
Cost Per Day $3 - $5
## SHORT ACTING NICOTINE REPLACEMENT THERAPIES

### NRT INHALER

<table>
<thead>
<tr>
<th>Treatment Plan</th>
<th>Instructions for Use</th>
<th>Possible Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>(when using inhaler on its own)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>◦ Use 6-12 cartridges per day for the first 6 weeks</td>
<td>◦ Puff as needed to manage cravings</td>
<td>◦ Headache</td>
</tr>
<tr>
<td>◦ Reduce the amount of cartridges used per day in weeks 6-12</td>
<td>◦ Inhale 80 puffs over 20 minutes or until cravings are gone. Often, using the inhaler for 5 minutes is enough</td>
<td>◦ Mouth/throat irritation</td>
</tr>
<tr>
<td>◦ Some smokers require 1-2 cartridges per day beyond 12 weeks to manage cravings</td>
<td>◦ Take slow puffs to avoid throat burn</td>
<td>◦ Nausea</td>
</tr>
<tr>
<td>◦ One cartridge is the equivalent to 1-2 cigarettes</td>
<td>◦ Avoid eating or drinking 15 minutes before or during use</td>
<td></td>
</tr>
</tbody>
</table>

### Possible Side Effects

- Headache
- Mouth/throat irritation
- Nausea

**Cost Per Unit**: $39 - $42 (as sold) for 42 cartridges

**Cost Per Day**: $6

### NRT GUM

<table>
<thead>
<tr>
<th>Treatment Plan</th>
<th>Instructions for Use</th>
<th>Possible Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>(when using gum on its own)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>◦ 2 mg (if you smoke your first cigarette 30 or more minutes after you wake up)</td>
<td>◦ Should be chewed slowly until you can taste the nicotine or feel a slight tingling in your mouth, then stop chewing</td>
<td>◦ Mouth soreness</td>
</tr>
<tr>
<td>◦ 4 mg (if you smoke your first cigarette within 30 minutes of waking up)</td>
<td>◦ Place the gum between your cheek and gums. After one minute, repeat the process until cravings are resolved</td>
<td>◦ Jaw pain</td>
</tr>
<tr>
<td>◦ Use one piece as needed every 1-2 hours for weeks 1 - 6</td>
<td>◦ Chew and park each piece for 20 - 30 minutes or until your craving passes</td>
<td>◦ Hiccups</td>
</tr>
<tr>
<td>◦ Use one piece as needed every 2-4 hours for weeks 7 - 9</td>
<td>◦ Avoid eating or drinking 15 minutes before or during use</td>
<td>◦ Nausea</td>
</tr>
<tr>
<td>◦ Use one piece as needed every 4-8 hours for weeks 10 - 12 or longer</td>
<td></td>
<td>◦ Clings to dental work</td>
</tr>
</tbody>
</table>

**Possible Side Effects**

- Mouth soreness
- Jaw pain
- Hiccups
- Nausea
- Clings to dental work

**Cost Per Unit**: $23 - $44

2 mg / dose, 105 pieces
- $30 - $44
4 mg / dose, 105 pieces
- $44

**Cost Per Day**: $2 - $3

2 mg and 4 mg dose
### NRT LOZENGE

<table>
<thead>
<tr>
<th>Treatment Plan</th>
<th>Instructions for Use</th>
<th>Possible Side Effects (Frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(when using lozenge on its own)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ 1 mg or 2 mg (if you smoke your first cigarette 30 or more minutes after waking up)</td>
<td>☐ Place the lozenge in your mouth and let it dissolve, moving it back and forth from time to time</td>
<td>☐ Nausea ☐ Headache</td>
</tr>
<tr>
<td>☐ 4 mg (if you smoke your first cigarette within 30 minutes of waking up)</td>
<td>☐ Each lozenge will last about 20-30 minutes</td>
<td>☐ Heartburn ☐ Coughing</td>
</tr>
<tr>
<td>☐ Use one piece as needed every 1-2 hours for weeks 1 - 6</td>
<td>☐ Avoid eating or drinking 15 minutes before or during use</td>
<td>☐ Hiccups</td>
</tr>
<tr>
<td>☐ Use one piece as needed every 2-4 hours for weeks 7 - 9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Use one piece as needed every 4-8 hours for weeks 10 -12 or longer</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Treatment Plan Instructions for Use

- Place the lozenge in your mouth and let it dissolve, moving it back and forth from time to time.
- Each lozenge will last about 20-30 minutes.
- Avoid eating or drinking 15 minutes before or during use.

#### Possible Side Effects

- Nausea
- Headache
- Heartburn
- Coughing
- Hiccups

#### Cost Per Unit

- 2 mg / dose, 88 pieces
  - $31 - $39
- 4 mg / dose, 88 pieces
  - $38 - $49

#### Cost Per Day

- 2 mg and 4 mg dose
  - $4 - $7

### NRT MOUTH SPRAY

<table>
<thead>
<tr>
<th>Treatment Plan</th>
<th>Instructions for Use</th>
<th>Possible Side Effects (Frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(when using mouth spray on its own)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Use 1-2 sprays every 30-60 minutes as needed and reduce frequency over 12-24 weeks</td>
<td>☐ First use, prime the spray pump</td>
<td>☐ Headache</td>
</tr>
<tr>
<td>☐ Maximum dosage is 4 sprays per hour or 64 sprays per day</td>
<td>☐ Point spray nozzle as close to open mouth as possible and release</td>
<td>☐ Nausea</td>
</tr>
<tr>
<td>☐ Each spray contains 1 mg of nicotine (Each dispenser provides 150 sprays)</td>
<td>☐ Do not inhale to avoid getting spray down throat</td>
<td>☐ Vomiting</td>
</tr>
<tr>
<td></td>
<td>☐ Refrain from swallowing for a few seconds</td>
<td>☐ Changes in taste</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Tingling sensation of the mouth</td>
</tr>
</tbody>
</table>

#### Treatment Plan Instructions for Use

- First use, prime the spray pump.
- Point spray nozzle as close to open mouth as possible and release.
- Do not inhale to avoid getting spray down throat.
- Refrain from swallowing for a few seconds.

#### Possible Side Effects

- Headache
- Nausea
- Vomiting
- Changes in taste
- Tingling sensation of the mouth

#### Cost Per Unit

- 1 mg / dose, 150 sprays
  - $27 - $42
- 2 mg and 4 mg dose
  - $12 – $15
OTTAWA MODEL FOR SMOKING CESSATION PRACTICE TOOLS

These tools have been developed to support the integration of best practices for smoking cessation into busy clinic environments and can be easily integrated into electronic medical records or used in hard copy formats.

TOBACCO USE VITAL STAMP

TOBACCO USE SURVEY

SMOKING CESSATION CONSULT FORM

QUIT PLAN BOOKLET FOR SMOKERS READY TO QUIT

These tools are available for use in both hard copy and electronic format. To receive a copy of any of these tools, please contact us at scprimarycare@ottawaheart.ca
COMMUNITY RESOURCES – SMOKING CESSATION

OPTIONS FOR NRT AT LOW OR NO COST

Walmart: $26.96 for 7-day supply of Nicoderm Patch. Habitrol and No-Name brands are cheaper.
A.C.E.S.S. Programs (City of Ottawa): $10.00 per week plus a script, must show up every week. Will provide for 6 weeks.
Employer: May cover the cost through employee assistance programs.

PROVINCIAL QUIT SMOKING SERVICES

<table>
<thead>
<tr>
<th>Clinic/Program</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smokers’ Helpline (Text-based Support)</td>
<td>Text Messaging Support&lt;br&gt;Free interactive text support, advice and information for up to 13 weeks, on a mobile device. Go to: smokershelpline.ca</td>
</tr>
<tr>
<td>Smokers’ Helpline (Telephone-based Support)</td>
<td>Toll-free, bilingual, confidential telephone service for all smokers, whether or not they are ready to quit. Provide evidence-based counselling and smoking cessation support. They can also assist family and friends who would like to help a smoker quit. Does not presently address pharmacotherapy.</td>
</tr>
<tr>
<td>Smokers’ Helpline (Online Support)</td>
<td>An interactive, web-based service available 24 hours a day, 7 days a week offering tips, tools and support to help with quitting smoking. Does not presently address pharmacotherapy.</td>
</tr>
</tbody>
</table>

Appropriate for: Smokers who want to quit, may be thinking about quitting, or need support to remain smoke-free<br>Family members<br>Health professionals

Hours: Mon to Thurs: 8:00 a.m. – 9:00 p.m.<br>Fri: 8:00 a.m. – 6:00 p.m.<br>Sat & Sun: 9:00 a.m. – 5:00 p.m.

Language: English, French
Cost: N/A
Referral: Self-referral, physician referral

Clinic/Program: Smokers’ Helpline (Online Support)<br>Canadian Cancer Society<br>www.smokershelpline.ca

Appropriate for: All smokers

Hours: 24/7
Language: English, French
Cost: N/A
Referral: Self-referral
CITY OF OTTAWA

Clinic/Program: Quit Smoking Program
Prevention and Wellness Centre (PWC)
University of Ottawa Heart Institute (UOHI)
Room H-2342 40 Ruskin Street, Ottawa, ON
Tel: 613-761-5464 Toll Free: 1-866-399-4432 Fax: 613-761-5309
Email: quitsmoking@ottawaheart.ca

Description: The Quit Smoking Program is open to all individuals who are interested in quitting smoking. This includes patients, family members and the general public. The Program provides a non-judgmental and supportive environment where a quit plan is tailored to meet individual needs. Following a group information session, participants can schedule one-on-one counseling sessions with a nurse trained and experienced in tobacco treatment dependence. Counseling sessions are scheduled as needed.

Appropriate for: All adult smokers requiring assistance with making a cessation attempt

Hours: Clinic hours weekdays and evenings

Language: English, French

Cost: $25 commitment fee

Referral: Referral/Registration: Quit Smoking Program registration can be completed by phone or in person at the Prevention and Wellness Centre. For more information on the Smoking Cessation Program visit the Prevention and Wellness Centre website: http://www.ottawaheart.ca/heart_disease/smoking.htm or call 613-761-5464.

Clinic/Program: Kick Butt for 2 - Young/Single Parents of Ottawa

St. Mary's Home Community Outreach and Program Centre:
780 De L'Eglise, Ottawa ON K1K 3K7
Tel: 613-749-2491 Fax:613-569-6582
www.stmaryshome.com
info@stmaryshome.com

Salvation Army Bethany Hope Centre:
1140 Wellington Street West, Ottawa ON K1Y 2Z3
Tel: 613-725-1733

Youville Centre:
150 Mann Avenue, Ottawa ON K1N 8P4
Tel: 613-231-5150
www.youvillecentre.org

Description: This is an 8-week program where participants identify their reasons for smoking, find other ways to cope with stress, and learn about the health effects of smoke on themselves and their babies. Participants will receive weekly support in reaching their goals. Child care and bus tickets available.

Appropriate for: Program for pregnant teens and young single parents

Hours: Program is offered in various locations with different times and dates. Call for schedule and locations.

Language: English, French

Cost: N/A

Referral: Self-referral
Clinic/Program: **Quit Smoking Clinic for Teens**  
Clinic for Adolescents  
1929 Russell Road, Suite 314, Ottawa, ON  
Tel: 613-737-7119

Description: Individual physician counselling for teen smokers. Individual or group sessions available

Appropriate for: Youth aged 12 to 19 years

Hours: By appointment on Thurs 9:00 a.m. - 5:00 p.m.

Language: English

Cost: N/A

Referral: Physician referral required

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**ACESSIBLE CHANCES FOR EVERYONE TO STOP SMOKING (A.C.E.S.S.) PROGRAM**

Clinic/Program: **A.C.E.S.S. Smoking Cessation Program**  
Ottawa Public Health (OPH)  
100 Constellation Crescent, Ottawa, ON  
Tel: 613-580-6744 or Toll Free: 1-866-426-8885

Description: This program is a partnership between Ottawa Public Health and Community Health Centres. 8-week group program offered fall, spring, and winter. The program offers subsidized NRT. See below for locations.

Carlington Community and Health Services  
900 Merivale Road, Ottawa, ON  
Tel: 613-722-4000 x 400

Centertown Community Health Centre  
420 Cooper St., Ottawa, ON  
Tel: 613-233-2317 x 3005

Lowertown Community Resource Centre  
40 Cobourg St., Ottawa, ON  
Tel: 613-789-9390

Pinecrest-Queensway Health & Community Services  
1365 Richmond Road, 2nd Floor, Ottawa, ON  
Tel: 613-820-4925

Sandy Hill Community Health Centre  
221 Nelson Street (at Rideau), Ottawa, ON  
Tel: 613-789-8458

Somerset West Community Health Centre  
55 Eccles Street, Ottawa, ON  
Tel: 613-238-8210 ext. 1213

South-East Ottawa Centre for a Healthy Community  
1355-600 Bank Street, Ottawa, ON  
Tel: 613-737-7195 ext. 2319

Wabano Centre for Aboriginal Health  
299 Montreal Road, Ottawa, ON  
Tel: 613-748-0657

East Ottawa Community Family Health Team  
3095 St. Joseph Blvd, Suite 202, Orleans ON  
Tel: 613-590-0533

Appropriate for: All adult smokers

Hours: Vary – contact OPH

Language: English and/ or French

Cost: N/A

Referral: Self-referral
Clinic/Program: Nicotine Anonymous
Dalhousie Community Centre
755 Somerset St. W, Ottawa ON
Tel: 613-564-1188

Description: 12 step program ongoing self-support group
Appropriate for: All Smokers
Hours: Tuesday Evening
Language: English
Cost: Contributions accepted
Referral: Self-referral

Clinic/Program: Seventh day Adventist Church - Breathe Free
2200 Benjamin Avenue, Ottawa ON
Tel: 613-728-8178

Description: 8 two-hours sessions over 3 weeks. Follow-up at 6 and 12 months offered on demand, waiting list complied.
Appropriate for: All smokers
Language: English
Cost: $40 per person or $55 per couple
Referral: Self-referral

EASTERN COUNTIES

Clinic/Program: Quit Smoking Program
Eastern Ontario Health Unit
Head Office: 1000 Pitt Street, Cornwall, ON
Tel: 613-933-1375 or Toll Free: 1-800-267-7120 (Ask for Health Line)

Description: Group quit smoking workshops. 6 one-hour sessions. Brief individual counselling also available.
Appropriate for: All smokers
Hours: Various locations across five counties based on demand.
Language: English, French
Cost: N/A
Referral: Self-referral
Clinic/Program: **Smoking is a Drag**  
Seaway Valley Community Health Centre  
353 Pitt Street, Cornwall, ON K6J 3R1  
Tel: 613-936-0306 Fax: 613-936-0521  
Website: www.seawayvalleychc.ca  
Email: info@seawayvalleychc.ca  

Description: Quitting is possible and it is never too late! Learn strategies for quitting with success. Create an Action Plan, learn about different methods to quit, how to manage stress, cravings and more.

Appropriate for: Anyone wanting to quit smoking  
Hours: To register, call Nancy, Health Educator/Promoter at: 613-936-0306 ext.151  
Language: English  
Cost: N/A  
Referral: Self referral

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**RENFREW COUNTY & DISTRICT**

Clinic/Program: **Renfrew Country and District Health Unit**  
7 International Drive, Pembroke, ON  
Tel: 613-735-8666 or Toll Free: 1-800-267-1097 ext. 666 (Health Information Line)

Description: Quit smoking sessions and programs, minimal contact intervention, and free self-help quit information.

Appropriate for: All smokers  
Hours: Vary  
Language: English, French  
Cost: N/A  
Referral: Self-referral

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Clinic/Program: **Strengthening the Forces**  
Health Promotion Office  
57 Festubert Blvd., Unit P – 118, CFB Petawawa, ON  
Tel: 613-687-5511 ext. 4685

Description: “BUTT OUT” program for military members, their families, and members of the defence team.

Appropriate for: All smokers  
Hours: Vary  
Language: English  
Cost: N/A  
Referral: Self-referral
**LEEDS, LANARK & GRENVILLE**

<table>
<thead>
<tr>
<th>Clinic/Program</th>
<th>Leeds, Grenville &amp; Lanark District Health Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>458 Laurier Boulevard, Brockville, ON</td>
</tr>
<tr>
<td>Phone</td>
<td>Tel: 613-345-5685 or Toll Free: 1-800-660-5853</td>
</tr>
<tr>
<td>Description</td>
<td>Brief counselling and free self-help quit information.</td>
</tr>
<tr>
<td>Appropriate for</td>
<td>All smokers</td>
</tr>
<tr>
<td>Hours</td>
<td>Vary</td>
</tr>
<tr>
<td>Language</td>
<td>English, French</td>
</tr>
<tr>
<td>Cost</td>
<td>N/A</td>
</tr>
<tr>
<td>Referral</td>
<td>Self-referral</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Clinic/Program</th>
<th>Brockville Cardiovascular Program Smoking Cessation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>75 Charles St., Brockville, ON</td>
</tr>
<tr>
<td>Phone</td>
<td>Tel: 613-345-5645 ext.1414 Fax: 613-345-8348</td>
</tr>
<tr>
<td>Description</td>
<td>This program provides individual counselling for patients who want to quit.</td>
</tr>
<tr>
<td>Appropriate for</td>
<td>All smokers</td>
</tr>
<tr>
<td>Hours</td>
<td>By appointment on Wed &amp; Fri 1:00 p.m. - 3:00 p.m.</td>
</tr>
<tr>
<td>Language</td>
<td>English</td>
</tr>
<tr>
<td>Cost</td>
<td>Free</td>
</tr>
<tr>
<td>Referral</td>
<td>Must be a registered cardiac rehabilitation participant in the Brockville Cardiovascular Program.</td>
</tr>
</tbody>
</table>

**NOTES**
**OBESITY AND WEIGHT MANAGEMENT**

**PRINCIPLES OF OBESITY MANAGEMENT**

Effective obesity management starts with the recognition that most obese patients have already experienced multiple psycho-social traumas related to their weight.

Global management includes active screening and management of obesity related risk factors and co-morbidities

In considering treatment strategies, assess individual root causes and tailor strategies to remove road blocks

Achievement and maintenance of a 5 to 10% weight loss improves risk factors and co-morbidities.

Collaborate with patients in setting realistic individual goals and outcome targets

Caution: Ideal body weight or BMI tables are not suitable tools for determining weight loss targets in obese patients. *These tables are based on average body composition and are only applicable to individuals who have healthy body weights or up to 10% excess weight.*

Obesity is a chronic disease and requires long term intervention, monitoring and follow up.

**GOALS OF OBESITY MANAGEMENT**

- Active patient screening and counselling at all appropriate clinic visits
- Inclusion of regular follow up clinic visits that focus only on weight management
- Management of associated risk factors and co-morbidities

**OBESITY MANAGEMENT STRATEGIES** *(Adapted with permission from the Edmonton Obesity Staging System)*

<table>
<thead>
<tr>
<th>Stage</th>
<th>Management</th>
<th>Specific strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage 0:</strong></td>
<td>No apparent obesity-related risk factors (↑ Blood pressure, ↑ Serum lipids ↑ Fasting glucose), no physical symptoms, no psycho-pathology, no functional limitations and/or impairment of well being.</td>
<td>Identify factors contributing to increased body weight.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Counsel to prevent further weight gain through lifestyle measures including healthy eating and increased physical activity.</td>
</tr>
<tr>
<td><strong>Stage 1:</strong></td>
<td>Presence of obesity-related sub-clinical risk factors, mild physical symptoms (dyspnea on moderate exertion, occasional aches and pains, fatigue), mild psychopathology, mild functional limitations and/or mild impairment of well being.</td>
<td>Investigation for other (non-weight related) contributors to risk factors. More intense lifestyle interventions, including diet and exercise to prevent further weight gain, Monitoring of risk factors and health status.</td>
</tr>
<tr>
<td><strong>Stage 2:</strong></td>
<td>Presence of established obesity-related chronic disease (hypertension, type II diabetes, sleep apnea, osteoarthritis, reflux disease, polycystic ovary syndrome), Anxiety disorder, moderate limitations in activities of daily living and/or well being.</td>
<td>Initiation of obesity treatments including consideration of all behavioural, pharmacological and surgical treatment options, Close monitoring and management of co-morbidities as indicated.</td>
</tr>
<tr>
<td><strong>Stage 3:</strong></td>
<td>Established end-organ damage (myocardial infarction, heart failure, diabetic complications, incapacitating osteoarthritis), significant psychopathology, significant functional limitations and/or impairment of well being.</td>
<td>More intensive obesity treatment including consideration of all behavioural, pharmacological and surgical treatment options. Aggressive management of co-morbidities as indicated.</td>
</tr>
<tr>
<td><strong>Stage 4:</strong></td>
<td>Severe (potentially end-stage) disabilities from obesity-related chronic diseases, severe disabling psychopathology, severe functional limitations and/or severe impairment of well being.</td>
<td>Aggressive, feasible obesity management. Palliative measures including pain management, occupational therapy and psychosocial support.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Refer as indicated for specialist management of co-morbidities.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maintain a supportive and positive regard throughout each patient interaction.</td>
</tr>
</tbody>
</table>

Obesity Management Programs *(See appendix)*

Pharmacological Interventions *(See appendix for indications)*

Referral for bariatric surgical intervention
**BARRIERS TO EFFECTIVE WEIGHT MANAGEMENT**

- Some medications; especially some psychotropic medications
- Sleep apnea
- Depression, ADHD
- GERD
- Inadequate pain management
- Setting unrealistic weight loss goals

**MEDICATIONS AND OBESITY**

Medication for Weight Loss
Orlistat

Psychotropic medications that cause weight gain:

- Clozapine
- Lithium
- Amitriptyline
- Paroxetine
- Olanzapine
- Valproate
- Chlomipramine
- Quetiapine
- Gabapentin
- Notriptyline
- Risperidone
- Chlorpromazine

Type II Diabetes Pharmacotherapies that may facilitate weight loss or that are weight neutral

- Liraglutide
- Exenatide
- Metformin
- Sitagliptin
- Saxagliptin

**SAMPLE SCRIPT FOR A BRIEF OFFICE VISIT**

**Talking to patients about their weight:**

*Do you view your weight as a problem? Does weight concern you?*

*Are you interested in changing?*

*Are you ready to change now?*

**Talking to patients about weight-associated health issues:**

*Can we take a minute to discuss your health and weight?*

1. *Your BMI weight is ___.*
2. *People with BMI weight in this range are at risk for heart disease and diabetes...*
3. *What do you think of this information?*
4. *What are your ideas on how you might make some healthy changes?*
5. *How ready are you to take the next step? (Scale. 0—10)*

**READINESS SCALE: 0 - 10**

<table>
<thead>
<tr>
<th>0 – 3: Not ready</th>
<th>4 – 6: Getting ready</th>
<th>7 – 10: Ready</th>
</tr>
</thead>
<tbody>
<tr>
<td>“What might make you more ready?”</td>
<td>“What might your next steps be?”</td>
<td>“What is your plan?”</td>
</tr>
<tr>
<td>• Acknowledge patient’s decision</td>
<td>• Advise 5 – 10% weight loss has significant benefits</td>
<td>• Collaborate on treatment strategy and goals</td>
</tr>
<tr>
<td>• Address co-morbidities</td>
<td>• Discuss treatment options</td>
<td>• Assess gaps in knowledge, barriers to meeting goals</td>
</tr>
<tr>
<td>• Repeat with each visit at physician discretion</td>
<td>• Discuss treatment priorities</td>
<td>• Discuss strategies to increase physical activity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Discuss follow-up plan</td>
</tr>
</tbody>
</table>
HOW AND WHEN TO REFER FOR SURGERY:
Indications for surgical referral:
  • BMI ≥ 40
  • BMI 35-39 with obesity related co-morbidities
To refer for surgical assessment: www.Bariatricregistry.ca

PHONE APPS AND WEB SITES

Criteria for evaluating weight loss web sites or smart phone apps:
  • Should not cost money
  • Should be user friendly
  • Do not push products
  • Should display calories and nutrients to help build calorie awareness and
  • focus on nutrient density
  • Should allow patient to customize profile to suit specific goals
  • Should include privacy settings/ allow patient to review terms and conditions of use.
  • Patient should feel comfortable working with the tool

Some Examples:
  • Lose It
  • Fat Secret
  • My Fitness Pal
  • My Net Diary
  • ProEattracker
  • Dietitian’s of Canada
  • www.eattracker.ca
COMMUNITY RESOURCES – OBESITY & WEIGHT MANAGEMENT

SPECIALTY PROGRAMS:

**Clinic/Program: Ottawa Hospital Weight Management Clinic**

Civic Campus, The Ottawa Hospital, 1053 Carling Ave.,
3rd Floor Maurice Grimes Lodge, Ottawa, ON K1Y 4E9
Tel: 613-761-5101 Fax: 613-761-5343
Website: http: www.weightclinic.ca
Director: Dr. Robert Dent

**Description:** The Ottawa Hospital’s weight management program is the area’s only weight management program run by medical professionals in a hospital setting. It is designated as the region’s only Bariatric Centre of Excellence and Regional Assessment and Treatment Centre by the Ontario Bariatric Registry (www.bariatricregistry.ca)

Participants meet for private and group sessions with the professionals on the team. The one-year Core Program is suitable for those with a BMI greater than 30. This program addresses all aspects of weight management, from diet and exercise to behaviour modification, in both group and individual sessions.

**Appropriate for:** Individuals with a BMI >30

**Hours:** Mon to Thurs: 8:00 a.m. - 4:00 p.m.

**Language:** English

**Cost:** Depends on program

**Referral:** Physician referral required.

To refer: Download referral form: www.weightclinic.ca/referral; complete form and include blood test results (Total cholesterol, HDL, LDL, TG, TSH, Blood Glucose); fax form to clinic; and inform patient that clinic will contact them directly.

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**Clinic/Program: EMERALD Clinic – Ottawa Cardiovascular Centre**

1355 Bank St., Suite 502, Ottawa, ON K1H 8K7
Tel: 613-738-1584 Fax: 613-738-9097
E-mail: admin@ottawacvcentre.com
Website: www.ottawacvcentre.com/occ_emerald.html
Contact: May St-Pierre
Internist: Dr. Judy Shiau
Registered Dietitian: Danielle Aldous

**Description:** A safe and medically supervised weight loss program. The EMERALD Team will help your patients lose weight and keep it off successfully and safely. Specialization in helping patients with metabolic syndrome. Diagnostic criteria for metabolic syndrome (>3 parameters):

- Abdominal obesity (waist circumference: male >102 cm (40") / female >88 cm (35")
- TG ≥ 1.7 mmol/L
- HDL <1 mmol/L (male)/ <1.3 mmol/L (female)
- BP ≥ 130/85
- FBG ≥ 5.6 mmol/L

**Appropriate for:** Individuals with BMI >27 with CV risk factors

**Hours:** By appointment

**Language:** English, French

**Cost:** $400.00 (Pharmacotherapy is not included in the cost)

**Referral:** Physician referral required.

To refer: Download referral form: www.ottawacvcentre.com/OCC_Requisition_Form.pdf; complete form and fax to clinic; include recent lab/ blood reports; inform patient that clinic will contact them directly.
Clinic/Program: **Weight Watchers**  
Locations: Ottawa and surrounding areas (visit the website or contact Weight Watchers for locations).  
Tel: 1-800-267-9939  
Website: www.slengora.ca

Description: Weight Watchers® has taught millions of members how to lose weight. The Weight Watchers program is designed to promote a healthy rate of weight loss, up to two pounds a week after the first three weeks or up to 1% of body weight per week after the second week.

Appropriate for: Anyone who wants to lose weight assisted by a program

Hours: Vary by location

Language: English, French

Cost: $31 joining fee and $17 weekly fee (varies with payment plan)

Referral: Self-referral

Clinic/Program: **TOPS Club Inc.**  
Locations (Local Chapters): Ottawa, Nepean, Gloucester, Kanata, Orleans, Richmond, Stittsville, Kenmore, Metcalfe, Osgoode, Kemptville, Winchester, Carleton Place, Amaprior, Chesterville, Casselman, Smiths Falls, Plantagenet, Newington, Morrisburg, Perth, Renfew  
Tel: 414-482-4620 (TOPS Headquarters). For local chapters, check local telephone directory.  
Website: www.tops.org

Description: TOPS® (Take Off Pounds Sensibly) is the oldest international, non-profit, non-commercial weight loss support group. TOPS’ mission is to support members as they take and keep off pounds sensibly. Weekly meetings include private weigh-ins and a program that provides members with positive reinforcement and motivation to adhere to food and exercise plans.

Appropriate for: Anyone who wants to lose weight assisted by a program

Hours: Vary by location

Language: English, French

Cost: $30/ year + nominal chapter fees

Referral: Self-referral

Clinic/Program: **Overeaters Anonymous**  
Locations: Ottawa and surrounding areas (visit the website or contact Overeaters Anonymous for locations).  
Tel: 613-820-5669 (main office)  
E-mail: oaottawa@hotmail.com  
Website: www.OA-Ottawa.ca

Description: Overeaters Anonymous (OA) is a fellowship of individuals who, through shared experience, strength and hope, are recovering from compulsive overeating. OA welcomes everyone who wants to stop eating compulsively. The primary purpose is to abstain from compulsive overeating and to carry the message of recovery to those who still suffer.

Appropriate for: Anyone who suffers from an eating disorder (overeating, anorexia, bulimia)

Hours: Vary

Language: English, French

Cost: N/A

Referral: Self-referral
Clinic/Program: Minçavi
Locations: Ottawa and surrounding area (visit the website or contact Minçavi for locations).
Tel: 1-800-567-2761 Fax: 1-819-839-1091
Website: www.mincavi.com

Description: Minçavi is a nutritional program (not a diet) based on Canada’s Food Guide. Founded in 1984, Minçavi offers 200 meetings in over 160 towns in Quebec and Ontario where members are weighed-in, hear a motivational talk, receive information on healthy eating, and sample Minçavi recipes.

Appropriate for: Anyone who wants to lose weight assisted by a program

Hours: Mon to Fri: 8:00 a.m. - 5:00 p.m.

Language: English, French

Cost: $35 registration fee and $9 weekly or $16 bi-weekly fee

Referral: Self-referral

Clinic/Program: Dr. Douglas Bishop Weight Management
1335 Carling Ave., Suite 102, Ottawa, ON K1Z 8N8
Tel: 613-761-8015 Fax: 613-761-9585
E-mail: drbishop@bellnet.ca

Description: An Ottawa-based clinic specializing in the integration of proper nutrition, fitness and motivation in order to help you pursue a healthy lifestyle. Dr. Bishop is devoted to eliminating his patients’ weight concerns in order to enhance their emotional and physical well-being.

Hours: Mon & Wed: 8:00 a.m. - 5:00 p.m.
Tues: 8:00 a.m. - 6:30 p.m.
Thurs: 8:30 a.m. - 6:30 p.m.
Fri: 7:30 a.m. - 1:00 p.m.

Language: English

Cost: Call to inquire

Referral: Physician referral: Include medical history, recent lab work, and reason for referral; fax or email to clinic; and inform patient that clinic will contact them directly.
Self-referral: Call office or complete online appointment request

Clinic/Program: Bariatric Medical Institute
575 West Hunt Club, Ottawa, ON
Tel: 613-730-0264
Web: www.bmimedical.ca
Medical Director: Dr. Yoni Freedhoff

Description: Bariatric medicine is the medically-supervised treatment of obesity and its associated conditions. Bariatric medicine advocates a comprehensive, multi-faceted approach to the treatment of obesity, including medical assessment and monitoring, behavioural and dietary counselling, and exercise. Bariatric medicine aims not only for healthy weight loss but a lifetime of weight management.

Appropriate for: Anyone who feels they have a problem with their weight

Hours: Mon and Wed: 8:00 a.m. - 7:00 p.m., Tues, Thurs and Fri: 8:00 a.m. - 4:00 p.m.

Language: English

Cost: Exact cost $1,575 + HST regardless of amount of weight to be lost. No hidden fees or required product purchases.

Referral: Physician Referral no: 613-738-0088
Referral needs to include recent bloodwork-glucose, TSH and lipids.
**Clinic/Program:** Heart Delicious Nutrition Workshops  
Prevention and Wellness Centre (PWC)  
University of Ottawa Heart Institute  
40 Ruskin Street, Ottawa, ON, K1Y 4W7  
Tel: 613-761-4753 or 1-866-399-4432  
Website: http://www.ottawaheart.ca/content_documents/2011_-_Jul-Aug_ENG.pdf

**Description:**  
**ABCs to Heart Healthy Eating:** Develop the skills for heart healthy eating to reduce or control your blood cholesterol. Learn how to read food labels and get the facts on fat, cholesterol, fiber and salt.

**Heart Healthy Eating with Diabetes:** Get the lowdown on meal planning, managing your diabetes and heart healthy eating. For people wishing to control or prevent diabetes.

**French Workshop – Healthy Eating from A to Z:** Offered only in French. Learn how to read food labels and get the facts on fat, cholesterol, fiber and salt.

**Nutrition Tips for Weight Management:** Learn to set realistic goals for healthy weight management. Acquire the skills to develop balanced meals, portion sizes and techniques for weight loss and maintenance.

**Appropriate for:** Patients and members of the public who are interested in learning about heart healthy eating.

**Hours:** Refer to schedule online or contact PWC for details.

**Language:** English, French

**Cost:** N/A

**Referral:** Registration required by telephone

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**Clinic/Program:** EatRight Ontario  
Tel: 1-877-510-5102  
www.eatrightontario.ca

**Description:** EatRight Ontario allows you to ask nutrition-related questions and receive feedback by phone or email from a Registered Dietitian. Nutrition tools and links offer many additional resources to support you in developing healthy eating habits for you and your family.

**Appropriate for:** Anyone with a nutrition related question

**Hours:** Mon, Wed & Fri: 9:00 a.m. - 5:00 p.m. Tues & Thurs: 9:00 a.m. - 9:00 p.m.

**Language:** English, French

**Cost:** N/A

**Referral:** N/A
PHYSICAL ACTIVITY

Reference: Adapted from the following sources: PACE Canada; Australia Heart Foundation. Getting patients more active: Practical information for general practices (2005); and Australian General Practice. Lifescripts: Physical activity: Helping patients to become more active (2004).

Recommended level for Physical Activity is 30 - 60 minutes of CONTINUOUS moderate physical activity on most days of the week. Examples of Physical Activity: Aerobic: walking, swimming; Anaerobic: sprinting; Isotonic: lifting weights; Resistance training: elastic, rubber.

EXERCISE IS PREVENTION

Those who think they have no time for bodily exercise will sooner or later have to find time for illness. ~Edward Standley

A growing body of evidence demonstrates that family physicians can effectively increase patients’ physical activity levels through brief clinical interventions that include:

- Brief advice
- Provision of written information, such as an individualized prescription
- Follow-up over subsequent consultations

EXERCISE IS TREATMENT

Movement is a medicine for creating change in a person’s physical, emotional, and mental states. ~Carol Welch

Decreased blood pressure

Physical activity has an independent capacity to lower blood pressure. Studies show moderate intensity exercise can reduce both systolic and diastolic blood pressure by 7 mmHg which compares favorably with studies of pharmacological treatment.

As good as an antidepressant

Trials of PA as a treatment for anxiety and depression have found PA to be as effective as antidepressant medication or psychotherapy for mild to moderate anxiety and depression.

Prevention and treatment of diabetes

Physical activity, including appropriate endurance and resistance training, is a major therapeutic modality for type 2 diabetes. And can decrease HbA1C up to 0.89%. On subjects at risk of developing type 2 diabetes, lifestyle intervention including 30 minutes of moderate physical activity everyday reduced the risk of developing type 2 diabetes by 58% whereas pharmacological therapy reduce the incidence by 31%.

Improved quality of life

Emerging evidence suggests the tailored exercise programs may lead to improvements in quality of life even among heart failure patients nearing the end of life.

Higher HDL

In 8,764 individuals aged 45 – 64 years, 9 years of follow-up data consistently showed that increases in the level of physical activity is associated with increases in HDL.
COMMUNITY RESOURCES – PHYSICAL ACTIVITY

The Champlain District is home to many physical activity programs and services including exercise facilities, walking programs, and recreation programs. The following is a short summary of what is available in our community. For a more detailed list of all the programs and services offered (program description, cost, location, hours, and contact information), please refer to the Physical Activity – Community Resources Web link: http://www.ottawaheart.ca/content_documents/Community-Resources-2011-03-21.pdf companion document where you will find all the physical activity programs and services in the Champlain LHIN divided by geographic area (Ottawa, Eastern Ontario, Renfrew, and Leeds, Grenville & Lanark).

HEART WISE EXERCISE PROGRAMS

Heart Wise programs are intended for participants who are interested or concerned about their heart health. Heart Wise programs meet the following criteria:

• Encourage regular, daily aerobic exercise;
• Incorporate and encourage warm-up, cool down and self-monitoring with all exercise sessions;
• Allow participants to exercise at a safe level and have progressive options to increase intensity, if appropriate;
• Accept participants with a known history of cardiac disease, provided they have physician approval; and,
• Provide health screening for all participants.

For more information and locations, visit www.heartexercise.ca

INDOOR/OUTDOOR WALKING CLUBS

There are a variety of walking clubs around Ottawa and throughout the Champlain District. Walking clubs are usually a supportive group of people who meet at different locations and times across the Champlain region to walk for fun and health. There are no age limits or prerequisites and most memberships are free. Some walking clubs are held indoors and others are outdoors depending on the season.

POOL FACILITIES

Indoor swimming pool programs for adults and older adults include lane swimming and a variety of low intensity aqua-fitness classes.

LOW INTENSITY EXERCISE PROGRAMS

Community-based exercise programs are available for adults and older adults starting an exercise program or recovering from an injury. All group classes focus on cardiovascular and muscle conditioning in a fun and safe atmosphere.

INDIVIDUALIZED EXERCISE PROGRAMS

These exercise programs are tailored to a variety of audiences including:

• Individuals from diverse cultural communities
• New moms and moms-to-be
• Older adults with osteoporosis
• Adult hockey players
• Women with limited income

SPORTS ASSOCIATIONS

You will find a list of diverse sports organizations catering to different age groups and various interests such as:

• Cycling
• Rowing
• Tennis
• Curling
• Cross-country skiing
TIA & ISCHEMIC STROKE

Adapted from the Canadian Stroke Network, Canadian Best Practice Recommendations for Stroke Care 2012. Please visit www.strokebestpractices.ca for further information and/or most current recommendations.

TIA/MINOR STROKE MANAGEMENT ALGORITHM

Patients Presenting with Transient Ischemic Attack or Non-Disabling Stroke*

Major signs of TIA/Stroke include but are not limited to SUDDEN (may be temporary):
- **Focal weakness:** (with or without numbness)
- **Speech impairment** (aphasia, dysarthria)
- **Vision impairment** (visual field defect, loss of vision particularly in one eye, double vision)
- **Vertigo and/or ataxia** (especially with any of the above signs)
- **Headache** (severe and unusual)

The goal of outpatient/community management of TIA/Ischemic Stroke is **rapid** assessment and management to reduce the risk of a recurrent or more serious event.

Initial Management of TIA/Non-Disabling Stroke in the Primary Care Setting

Detailed history and physical examination to establish diagnosis of TIA/Non-Disabling Stroke

<table>
<thead>
<tr>
<th>TRIAGE PATIENT BASED ON TIME SINCE ONSET OF STROKE SYMPTOMS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Timing</strong></td>
</tr>
<tr>
<td><strong>Risk</strong></td>
</tr>
<tr>
<td><strong>Action</strong></td>
</tr>
</tbody>
</table>

Secondary Prevention

Implement secondary prevention measures aimed at reducing the risk of recurrent vascular events (see next page).

* Patients presenting after 2 weeks and/or those with isolated sensory symptoms / tingling may be considered less urgent if not accompanied by other high risk symptoms
## Management of TIA & Ischemic Stroke

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Target</th>
<th>Intervention</th>
</tr>
</thead>
</table>
| **Education**       | Recognize warning signs of Stroke                                       | Educate patients to recognize the warning signs of Stroke:  
- **Weakness**: Sudden weakness, numbness or tingling in the face, arm or leg  
- **Trouble speaking**: Sudden temporary loss of speech or trouble understanding speech  
- **Vision problems**: Sudden loss of vision, particularly in one eye, or double vision  
- **Headache**: Sudden severe and unusual headache  
- **Dizziness**: Sudden loss of balance, especially with any of the above signs  
Action: Call 9-1-1 or your emergency number IMMEDIATELY |
| **Smoking**         | Smoke-free                                                             | See Smoking Cessation Guideline  
- Ask about tobacco use at every visit.  
- Advise every tobacco user to quit. Advise of risks of continued smoking to Stroke patients.  
- Assess the tobacco user’s readiness to quit.  
- Assist by counselling and pharmacotherapy - see smoking cessation recommendations.  
- Arrange follow-up, referral to specialized programs or community programs.  
- Urge avoidance of exposure to environmental tobacco smoke at work and home. |
| **Physical Activity**| 30-60 minutes, 4-7 days/week                                            | See Physical Activity Recommendations  
- Encourage 30 to 60 minutes of moderate-intensity aerobic activity such as brisk walking on most days of the week, supplemented by an increase in daily lifestyle activities.  
- Identify problems/ barriers to starting and maintaining exercise program and discuss possible solutions.  
- Refer to suitable community program as indicated. |
| **Weight Management**| Target Weight: BMI 18.5 to 24.9 kg/m²  
Waist circumference: < 80 cm (35”) for women and < 94 cm (40”) for men  
Start with targeting weight loss of 5 – 10% of body weight. | See Obesity and Weight Management Recommendations  
- Assess BMI and/ or waist circumference (see Appendix B for instructions on proper waist line measurement).  
- Discuss weight issues with patients who are outside of the BMI and waist circumference limits.  
- Encourage weight maintenance or reduction through appropriate balance of physical activity, caloric intake.  
- Refer to behavioural programs as necessary. |
<p>| <strong>Alcohol Consumption</strong>| &lt;2 drinks/ day                                                        | No alcohol to moderate &lt;2 drinks/ day (&lt;9/ week for women; &lt;14/ week for men). |
| <strong>Sleep Apnea</strong>     | Identify and manage sleep apnea                                         | Assess patients for presence of sleep apnea as a risk factor prior to first stroke and a following stroke or TIA. Provide appropriate referrals to supportive and management services. |</p>
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<tr>
<td><strong>Hypertension</strong></td>
<td><strong>&lt;140/90 mmHg or &lt;130/80 mmHg if patient has Diabetes</strong></td>
<td><strong>See Hypertension Guideline</strong>&lt;br&gt;• Assess BP routinely, ideally at every health care encounter but no less than once annually.  &lt;br&gt;• For patients who have had a Stroke, BP lowering is recommended even if BP &lt;140/90 mmHg.  &lt;br&gt;• Ensure patient knows his/her BP values and targets.  &lt;br&gt;• Initiate or maintain lifestyle modification.  &lt;br&gt;• Add BP medication as needed to achieve targets.</td>
</tr>
<tr>
<td><strong>Dyslipidemia</strong></td>
<td><strong>LDL-C &lt;2.0 mmol/L or a 50% decrease in LDL-C; TC/ HDL-C Ratio &lt;4.0</strong></td>
<td><strong>See Dyslipidemia Guideline</strong>&lt;br&gt;• Conduct fasting lipid profile in all patients every 12 months.  &lt;br&gt;• Ensure patient knows his/her lipid values and targets.  &lt;br&gt;• If required, initiate LDL-lowering drug therapy.  &lt;br&gt;• Ensure adequate titration to achieve targets.  &lt;br&gt;• Start recommended dietary therapy.  &lt;br&gt;• Promote daily physical activity and weight management.  &lt;br&gt;• After obtaining required target, recheck annually.</td>
</tr>
<tr>
<td><strong>Glycemic Control/ Diabetes</strong></td>
<td><strong>If diabetic:</strong> HbA1c &lt;7% (&lt;6.5% if possible without hypoglycemia)**</td>
<td><strong>Screen for Diabetes annually or as clinically indicated.</strong>&lt;br&gt;• If diabetic:&lt;br&gt;  • Initiate lifestyle and pharmacotherapy to achieve near normal HbA1c.&lt;br&gt;  • Initiate pharmacotherapy as per recommendations from Canadian Diabetes Association.29</td>
</tr>
<tr>
<td><strong>Healthy Balanced Diet</strong></td>
<td><strong>Diet intake based on Canada’s Food Guide. Sodium:</strong>  &lt;br&gt;  9 – 50 yrs: 1500 mg  &lt;br&gt;  50 –70 yrs: 1300 mg  &lt;br&gt;  &gt; 70 yrs: 1200 mg</td>
<td><strong>Encourage consumption of a diet high in fresh fruits, vegetables, low-fat dairy products, dietary and soluble fibre, whole grains, protein from plant sources, low in saturated fat, cholesterol, and sodium.</strong>&lt;br&gt;• A daily upper consumption of 2300 mg sodium should not be exceeded by any age group.</td>
</tr>
<tr>
<td><strong>Antiplatelet</strong></td>
<td><strong>All patients with Ischemic Stroke or TIA to be started on antiplatelet therapy and continue indefinitely unless there is an indication for anticoagulation or a contraindication to the antiplatelet.</strong></td>
<td><strong>Evidence suggests that treating patients with: (1) ASA (2) clopidogrel, or (3) ASA + ER Dipyridamole combined are all options for secondary prevention stroke prevention.</strong>&lt;br&gt;• Long-term combinations of ASA and clopidogrel are not recommended.  &lt;br&gt;• If ASA alone is used, the usual maintenance dosage is 80 – 325 mg/day.  &lt;br&gt;• For secondary prevention in Ischemic Stroke or TIA, antiplatelet therapy is used life-long.</td>
</tr>
<tr>
<td><strong>Antithrombotic</strong></td>
<td><strong>Warfarin (INR 2-3)</strong>&lt;br&gt;<strong>Dabigatran</strong>&lt;br&gt;<strong>Rivaroxaban</strong></td>
<td><strong>Stroke/TIA patients with atrial fibrillation should be treated with anticoagulation (Warfarin, Dabigatran, or Rivaroxaban) Warfarin at a target INR range of 2.0 to 3.0.</strong></td>
</tr>
<tr>
<td><strong>Carotid stenosis</strong></td>
<td><strong>Carotid endarterectomy or stenting within 2 weeks in patients with ipsilateral 50-99% internal carotid artery stenosis</strong></td>
<td><strong>Referral to stroke expert for evaluation of carotid artery stenosis.</strong>&lt;br&gt;• Carotid endarterectomy should be offered to select patients with TIA/ ischemic stroke and ipsilateral 50-99% internal carotid artery stenosis.  &lt;br&gt;• Carotid endarterectomy may be considered for selected patients with 60-99% carotid stenosis who are asymptomatic or were remotely symptomatic (&gt; 3 months).</td>
</tr>
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</table>
### Functional Assessment and Management

<table>
<thead>
<tr>
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| **Functional status routinely assessed and managed** | • Assess patient for post-stroke residual functional deficits and abilities to carry out activities of daily living including driving and vocational concerns where appropriate.  
• Make appropriate referrals for out-patient, ambulatory, or community-based rehabilitation and recovery programs (refer to community resources page). |  

### Management of Depression, Anxiety and Cognitive Changes

<table>
<thead>
<tr>
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<th>Intervention</th>
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</thead>
</table>
| **Mood and cognitive changes for post stroke/ TIA patients routinely assessed and managed.** | • Parents and family members (especially primary caregivers) should be screened for mood changes and changes in cognition (executive functions, IADLs, memory).  
• Screening for mood and cognition changes should occur periodically, as changes may manifest over a longer period of time.  
• Make appropriate referrals for comprehensive assessment and ongoing management of mood and cognitive changes.  
• Continue to provide patient and family education at all healthcare encounters. |  

COMMUNITY RESOURCES – TIA & ISCHEMIC STROKE

CHAMPLAIN REGIONAL STROKE NETWORK

Web: www.champlainregionalstrokenetwork.org

The Champlain Regional Stroke Network is accountable for providing leadership, development, implementation and coordination of Stroke care throughout the region and across all points in the spectrum of care (health promotion, primary and secondary prevention, pre-hospital, acute care, rehabilitation, and community reintegration including long-term care).

Stroke prevention encompasses risk factor reduction both at a population and individual level. Implementing optimal stroke prevention strategies throughout the whole continuum of care has the potential to reduce the incidence of stroke by as much as 80%. (Rothwell, P.M. et al., 2007).

Primary prevention of stroke includes lifestyle modifications and measures to control blood pressure, cholesterol levels, diabetes mellitus, and atrial fibrillation. Lowering blood pressure in patients with hypertension prevents both hemorrhagic and ischemic stroke (relative risk reduction 35 to 45 percent).

CHAMPLAIN COMMUNITY CARE ACCESS CENTRE (CCAC)

The first step to accessing community-based services is through the Champlain Community Care Access Centre (CCAC). The Champlain CCAC coordinates in-home services such as nursing, physical therapy, occupational therapy, and personal support to qualifying clients. The CCAC can also help link Stroke survivors to alternate services available in the community such as adult day programs, meal delivery services, assistance with shopping or cleaning, or transportation assistance. When people are no longer able to manage at home, the CCAC helps them consider other housing options or coordinate admission to a long-term care home.

Tel: 613-745-5525, Toll free: 1-800-538-0520
Web: www.ottawa.ccac-ont.ca

Clinic/Program: The Ottawa Hospital Stroke Prevention Clinic
Civic Campus – 2nd floor; Section C2
1053 Carling Ave, Ottawa, ON K1Y 4E9
Tel: 613-798-5555 ext. 16156 Fax: 613-761-5320

Description: The Ottawa Hospital (TOH) was designated as the site of the Regional Stroke Prevention Clinic (SPC) in the fall of 2004. This ensures that individuals who are at high-risk for Stroke in our region receive evidence-based care founded on best practices. The SPC provides an integrated, comprehensive, inter-disciplinary approach to Stroke prevention. The main objectives are to reduce delays and inefficiencies in risk factor management of high-risk Stroke patients and to facilitate timely access to surgical interventions.

Appropriate for: Patients at high risk for Stroke or who have had a suspected TIA or other Stroke symptom.

Hours: Mon to Fri
Language: English, French
Cost: N/A

Referral: To access the SPC, patients will need to have a referral by an emergency room physician, their family physician, or another medical specialist. Upon receipt of the referral, the administrative assistant will contact the patient with an appointment to be seen in the SPC. In order to ensure efficiency of the clinic visit, it is possible that some tests will be completed prior to the clinic visit.

The SPC referral form can be downloaded from: www.champlainregionalstrokenetwork.org/ (found under “prevention” tab).

At the clinic, the patient will meet with the stroke neurologist and the stroke prevention nurse specialist to discuss their risk factors. The patients may receive treatment, have tests and be referred to a specialist. The care is based on the individual needs.
Clinic/Program: **Hawkesbury and District General Hospital Stroke Prevention Clinic**  
1111 Ghislain Street, Hawkesbury, ON (2nd Floor)  
Tel: 613-632-1111 ext. 412 Fax: 613-636-6194  

**Description:** The primary objective of the clinic is to reduce delays in obtaining urgent access to stroke prevention care following transient ischemic attack or mild stroke. We offer quick access to diagnostic services, evaluation of health, treatment, and referral to other services (internal medicine, neurology, neurosurgery, dietician, diabetes clinic, cardiac rehabilitation, smoking cessation). In addition, we offer education to the patient/family so they can improve their own health status.

The team includes a nurse practitioner, a dietician, and a secretary working in close collaboration with internal medicine specialists and neurologists. Laboratory and investigations are completed on site. To access the stroke prevention clinic, patients require a Hawkesbury Stroke Prevention Clinic Consult Form completed by an emergency physician, family physician or other medical specialist. This form can be downloaded from: www.champlainregionalstrokenetwork.org (found under “prevention” tab).

Upon receipt of the referral, the secretary will contact the patient with an appointment. To ensure the effectiveness of the clinic, certain tests will be completed before the initial visit to the clinic. At the clinic, the patient will meet the nurse practitioner who will perform the initial assessment and discuss risk factors.

**Appropriate for:** Patients at high risk for Stroke or who have had a suspected TIA or other Stroke symptoms.  

**Hours:** Tues to Fri: 8:30 a.m. to 4:30 p.m.  

**Language:** English, French  

**Cost:** N/A  

**Referral:** Physician referral required.  
To refer: Complete referral form; include all lab results and CT reports; call clinic to request referral and fax form to clinic; and, inform patient that clinic will contact them directly with appointment date and time.

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Clinic/Program: **Pembroke Regional Hospital Stroke Prevention Clinic**  
705 Mackay St, Pembroke ON (Ambulatory Clinics, Tower C, off Deacon Street)  
Tel: 613-732-2811 ext. 6640 Fax: 613-732-6350  

**Description:** The Stroke Prevention Clinic will provide rapid access to diagnostic services, health assessment, diagnosis, treatment and risk factor management to those who have had a Transient Ischemic Attack (TIA) or a very mild stroke.

**Appropriate for:** Patients at high risk for Stroke or who have had a suspected TIA or other Stroke symptom.  

**Hours:** Mon to Fri  

**Language:** English, French  

**Referral:** Download referral form from: www.champlainregionalstrokenetwork.org (found under “prevention” tab). Complete form and include recent test results, medications, and copy of CT report and advise patient to bring copy of CT head on CD; call clinic to make referral – instructions are then given as to where referral form is to be faxed; and, inform patient that clinic will contact them directly. Referrals can be made by family physicians or through any of the Renfrew County Hospital Emergency Departments.
Clinic/Program: **Cornwall Community Stroke Prevention Clinic**  
Cornwall Community  
Cornwall Community Hospital - McConnell site  
840 McConnell Ave, Cornwall ON K6H 5S5  
Phone: 613-938-4240 ext 3118 Fax: 613-938-5379

**Description:** The primary objective of the clinic is to reduce delays in obtaining urgent access to stroke prevention care following transient ischemic attack or mild stroke. We offer quick access to diagnostic services, evaluation of health, treatment, and referral to other services (internal medicine, neurology, neurosurgery, dietician, diabetes clinic, cardiac rehabilitation, smoking cessation). In addition, we offer education to the patient/family so they can improve their own health status.

The team includes a nurse practitioner and an administrative assistant working in close collaboration with a local neurologist. Laboratory and investigations are completed on site. To access the stroke prevention clinic, patients require a Cornwall Stroke Prevention Clinic Consult Form completed by an emergency physician, family physician or other medical specialist. This form can be downloaded from: http://www.champlainregionalstrokenetwork.org (found under “prevention” tab).

Upon receipt of the referral, the patient will be contacted with an appointment. To ensure the effectiveness of the clinic, certain tests will be completed before the initial visit to the clinic. At the clinic, the patient will meet the nurse practitioner who will perform the initial assessment and discuss risk factors.

**Appropriate for:** Patients at high risk for Stroke or who have had a suspected TIA or other Stroke symptom.

**Hours:** Mon to Fri: 9:00 a.m. to 12:00 p.m.

**Language:** English, French

**Referral:** Physician referral required. To refer: Complete referral form; include all lab results and CT reports; call clinic to request referral and fax form to clinic. Inform patient that clinic will contact them directly with appointment date and time.

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**PROFESSIONAL EDUCATION/RESOURCES**

One of the key success factors in the Ontario Stroke Strategy is the dedication to best practice stroke care. Professional education resources and programs have been developed along the continuum of care to aid in the dissemination of the latest evidence, research and clinical implications related to best practice stroke care.

In the Champlain Region, recommendations for stroke related educational initiatives are vetted through the Regional Stroke Education Working Group. This multidisciplinary group is comprised of health care professionals from hospitals and community agencies providing health care to stroke survivors and their families. This group meets 3-4 times a year to discuss regional educational needs, review feedback from stroke educational initiatives and to develop the educational plan for each fiscal year (April 1st to March 31st). This group is also the main communication network for all stroke initiatives related to educational or professional resources.

If you have any questions about stroke education in our region, please contact your “Regional Stroke Education Working Group” member at your facility, or the Regional Stroke Education Coordinator at 613-798-5555 Ext 16152.

- The Canadian Stroke Best Practice Recommendations for Stroke care can be accessed at: www.strokebestpractices.ca
- Ontario Stroke System Secondary Prevention web initiative can be accessed at: www.heartandstroke.ca/profed
- Go to STROKE and then ACUTE CARE and then STROKE PREVENTION
CORONARY AND OTHER ATHEROSCLEROTIC VASCULAR DISEASE

A growing body of important clinical trial evidence confirms that, in patients with coronary and other atherosclerotic vascular disease, comprehensive risk factor management improves survival, reduces risk for further events, decreases the need for further revascularization procedures, and improves quality of life. AHA, 2011

SCREENING FOR PERIPHERAL VASCULAR DISEASE (PVD)


### Screen for PVD annually in:
- Men >40
- Women >50 or post-menopausal
- Patients with a recognized CVD risk factor

#### Basic Screening
- Edinburgh Claudication Questionnaire (below)
- Physical examination: focus on femoral bruits and pedal pulses

<table>
<thead>
<tr>
<th>Question</th>
<th>Correct Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you get pain or discomfort in your leg(s) when you walk?</td>
<td>Yes</td>
</tr>
<tr>
<td>- Yes</td>
<td></td>
</tr>
<tr>
<td>- No</td>
<td></td>
</tr>
<tr>
<td>- Unable to walk</td>
<td></td>
</tr>
<tr>
<td>- If you answered “yes” to question 1, please answer the following</td>
<td></td>
</tr>
<tr>
<td>questions:</td>
<td></td>
</tr>
<tr>
<td>2. Does this pain ever begin when you are standing still or sitting?</td>
<td>No</td>
</tr>
<tr>
<td>3. Do you get it when you walk uphill or hurry?</td>
<td>Yes</td>
</tr>
<tr>
<td>4. Do you get it when you walk at an ordinary pace on the level?</td>
<td>Yes</td>
</tr>
<tr>
<td>5. What happens if you stand still?</td>
<td>No</td>
</tr>
<tr>
<td>- Usually continues more than 10 minutes?</td>
<td></td>
</tr>
<tr>
<td>- Usually disappears in 10 minutes or less?</td>
<td>Yes</td>
</tr>
<tr>
<td>6. Where do you get this pain or discomfort?</td>
<td></td>
</tr>
<tr>
<td>- Mark the places with “X” on the diagram</td>
<td></td>
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</tbody>
</table>

### Consider ABI in asymptomatic individuals with one or more of the following:
- Smoker
- Diabetes
- Family history of PVD, CAD, or Stroke
- Dyslipidemia
- Hypertension

An ABI <0.9 is diagnostic of PVD
An ABI <0.4 is associated with severe disease

Complete full risk factor assessment and consider referral to vascular specialist if symptoms warrant for further evaluation including MRA (magnetic resonance angiography) and CTA (computed tomography angiography)

Only those claudicants who suffer from severely limiting claudication should be considered for revascularization procedures

The Edinburgh Claudication Questionnaire
* A positive questionnaire diagnosis of claudication is made only if the “correct” answer is given to all questions.
# MANAGEMENT OF CORONARY AND OTHER ATHEROSCLEROTIC VASCULAR DISEASE


<table>
<thead>
<tr>
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<th>Intervention</th>
</tr>
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</table>
| Smoking             | Smoke-free                    | See Smoking Cessation Guideline  
• Ask about tobacco use at every visit.  
• Advise every tobacco user to quit. Advise of risks of continued smoking to PVD/ CAD patients “The most important thing you can do to improve your heart health is to quit smoking”.  
• Assess the tobacco user’s readiness to quit.  
• Assist by counselling and pharmacotherapy - see smoking cessation recommendations.  
• Arrange follow-up, referral to specialized programs or community programs.  
• Urge avoidance of exposure to environmental tobacco smoke at work and home. |
| Physical Activity   | 30-60 minutes, 4-7 days/week  | See Physical Activity Recommendations  
• Encourage 30 to 60 minutes of moderate-intensity aerobic activity such as brisk walking on most days of the week, supplemented by an increase in daily lifestyle activities.  
• Encourage resistance training 2 days per week.  
• Refer to Cardiac Rehabilitation Program (patients with recent event) or Heart Wise Programs (all patients). |
| Weight Management   | Target weight  
BMI 18.5 to 24.9 kg/m²  
Waist circumference: <88 cm (35”) for women and <102 cm (40”) for men  
Start with targeting weight loss of 5 – 10% of body weight. | See Obesity and Weight Management Recommendations  
• Assess BMI and/ or waist circumference (see Appendix B for instructions on proper waist line measurement).  
• Discuss weight issues with patients who are outside of the BMI and waist circumference limits.  
• Encourage weight maintenance or reduction through appropriate balance of physical activity, caloric intake.  
• Refer to behavioural programs as necessary. |
| Hypertension        | <140/90 mmHg; or <130/80 mmHg if patient has diabetes | See Hypertension Guideline  
• Assess BP every 3 to 6 months.  
• Ensure patient knows his/ her BP values and targets.  
• Initiate or maintain lifestyle modification.  
• Add BP medication as needed to achieve targets. |
| Dyslipidemia        | LDL-C <2.0 mmol/L or a 50% decrease in LDL-C; TCHDL-C Ratio <4.0 | See Dyslipidemia Guideline  
• Conduct fasting lipid profile in all patients every 12 months.  
• Ensure patient knows his/ her lipid values and targets.  
• If required, initiate LDL-lowering drug therapy.  
• Ensure adequate titration to achieve targets.  
• Start recommended dietary therapy.  
• Promote daily physical activity and weight management.  
• After obtaining required target, recheck annually. |
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| Glycemic Control/Diabetes | If diabetic: HbA1c <7% (<6.5% if possible without hypoglycemia)       | • Screen for diabetes annually or as clinically indicated.  
• If diabetic:  
  • Initiate lifestyle and pharmacotherapy to achieve near normal HbA1c.  
  • Initiate pharmacotherapy as per recommendations from Canadian Diabetes Association.  |
| eGFR/ACR             | If proteinuria or CKD:  
Target ACR <40                                                          | • Screen with eGFR/ACR according to guideline.  
• If target exceeded:  
  • ACEI or ARB to maximum tolerated dose and modify CV risk factors to target ACR <40; and,  
  • If ACR >60, refer to nephrology. |
| Antiplatelet/Anticoagulant | ASA 80 – 325 mg/day  
Clopidogrel 75 mg/day  
Prasugrel 10 mg/day  
Ticagrelor 90 mg/twice daily | • Start ASA and continue indefinitely unless contraindicated.  
• Clopidogrel 75 mg daily is recommended as an alternative for patients who are intolerant of or allergic to aspirin.  
• Start a P2Y12 receptor antagonist (clopidogrel 75 mg daily, prasugrel 10 mg daily, or ticagrelor 90 mg twice daily) and continue for 12 months in patients receiving a bare-metal stent or drug-eluting stent for treatment of acute coronary syndrome.  
• For patients with symptomatic atherosclerotic peripheral artery disease of the lower extremity, start and continue ASA or clopidogrel. |
| ACE Inhibitors       |                                                                       | • Start and continue ACE inhibitors indefinitely in all patients with:  
  • Left ventricular ejection fraction <40% and in those with hypertension, diabetes, or CKD; and,  
  • Consider for all other patients.  
• Optional use of ACE inhibitors in:  
  • Low-risk patients with normal ejection fraction in whom cardiovascular risk factors are well controlled and revascularization has been performed.  
• Use ARB in patients who:  
  • Are intolerant of ACE inhibitors and have heart failure or ejection fraction <40%; and,  
  • Consider in other patients who are ACE inhibitor intolerant. |
| Beta Blockers        |                                                                       | • Start and continue indefinitely in all patients who have had myocardial infarction, acute coronary syndrome or left ventricular dysfunction with or without heart failure symptoms, unless contraindicated. |
| Depression           | Depression Screening                                                   | • Screen patients with recent coronary artery bypass graft surgery or myocardial infarction for depression.                                                                                                      |
| Influenza Vaccination| Annually                                                               | • All patients with CVD should have an influenza vaccination on an annual basis.                                                                                                                               |
COMMUNITY RESOURCES – CORONARY ARTERY DISEASE

SPECIALTY CLINICS / PROGRAMS:
Cardiac rehabilitation programs are designed to assist in achieving and maintaining a heart healthy lifestyle and to help patients return to everyday life. There are a number of program options available to residents living in the Champlain region.

CARDIAC REHABILITATION PROGRAM OPTIONS

| Clinic/Program: | University of Ottawa Heart Institute (UOHI) |
| Clinic/Program: | Cardiac Rehabilitation Programs |
| Clinic/Program: | 40 Ruskin Street, Ottawa, ON K1Y 4W7 |
| Clinic/Program: | Tel: 613-761-4572 Fax: 613-761-5336 |

Description: All of our program options include: coronary risk factor assessment, access to follow-up evaluation after three and twelve months, access to nutrition workshops, referral to services such as: nutritional counseling, stress management, smoking cessation, vocational counseling, psychological counseling, social work counseling.

(1) On-Site Supervised Program
- 2-3-month program
- Supervised on-site, twice-weekly exercise sessions (1 hour/session)
- Medical assessment by cardiac rehabilitation physician
- Classes are supervised by a physiotherapist and a nurse.
- Different class intensities based on your needs.

(2) Case-Managed Home Program
Provides flexibility for those unable to participate in hospital-based program
- 3-month program
- Tailored program focused on your personal heart health goals
- Weekly phone call that lasts approximately 30 minutes each
- Individual home exercise program - **no supervised exercise sessions**

(3) Brief Program
- Only for those patients that are able to exercise independently with **no supervised exercise sessions** and no on going follow-up
- Exercise evaluation and tailored home exercise program

Appropriate for: Patients with myocardial infarction, acute coronary syndrome, recent PCI and/ or bypass surgery.

Hours: Vary

Language: English, French

Cost: N/A

Referral: Physician referral required.
Please contact phone number 761-4572 and a referral form will be sent by fax.
Clinic/Program: Pembroke Regional Hospital Cardiac Rehabilitation Program
705 Mackay Street, Pembroke, ON
Tel: 613-732-2811 ext. 8091 Fax: 613-732-6350

Description:
• 3-6 month program, modeled after UOHI on-site program
• Supervised on-site, twice-weekly exercise sessions
• Education sessions
• Medical assessment
• Referral to a dietitian or social worker as needed
• Case-managed home program also available

Appropriate for: Patients with myocardial infarction, acute coronary syndrome, recent PCI and/ or bypass surgery.

Hours: Vary
Language: English
Cost: N/A
Referral: Physician referral required.
Complete referral form; attach most recent tests; fax to clinic; and advise patient that hospital will contact directly with intake appointment time and send out an information package to the patient.

Clinic/Program: Hawkesbury & District General Hospital Supervised Program
1111 Ghislain Street, Hawkesbury, ON
Tel: 613-632-1111 ext. 177
Contact: Natalie Aupin

Description:
• 12-week walking program
• Supervised on-site, twice-weekly exercise sessions
• Education sessions (4 Fridays in a row)
• Bilingual staff
• One to one prevention clinic

Appropriate for: Patients with myocardial infarction, acute coronary syndrome, recent PCI and/ or bypass surgery.

Hours: Vary
Language: English, French
Cost: N/A
Referral: Contact clinic for information or physician referral.

Clinic/Program: Cornwall Community Hospital Respiratory & Heart Failure Rehabilitation Program
840 McConnell Ave., Cornwall, ON K6H 5S5
Tel: 613-938-4240 ext. 3104
Contact: Sylvie Bélanger

Description:
• 3-month program, attend two times per week
• Education and disease management training
• Personalized advice
• Endurance training

Appropriate for: Anyone with any type of respiratory disease or heart failure

Hours: Vary
Language: English, French
Cost: N/A
Referral: Physician or nurse practitioner referral.
Clinic/Program: **Brockville Cardiovascular Program: Cardiac Rehabilitation and Vascular Risk Management**  
75 Charles Street, Brockville, Ontario, K6V 1S8  
Phone: 613-345-5645 ext. 1414 Fax: 613-345-8348  
Contact: Margriet Debruyn, ext. 1166  

**Description:** This program provides individualized exercise, education (Diabetes, nutritional), and counselling designed to help clients reduce their risk of facing future cardiac problems.  
**Appropriate for:** Cardiac patients requiring secondary prevention and cardiac rehabilitation  
**Hours:**  
Exercise days – Tues & Thurs: 9:00 a.m. to 5:30 p.m., Wed & Fri: 9:00 a.m. - 12:00 p.m.  
Assessment day – Fri: 1:00 p.m. - 3:00 p.m.  
**Language:** English  
**Cost:** N/A  
**Referral:** Physician referral is required. Please fax referral along with pre-treatment and most recent lipid profile, diabetic profile, reports on angiogram, angioplasty, surgery, or other cardiac procedures. Once referral is received, patients are contacted and arrangements to attend intake are made.  

**COMMUNITY-BASED PROGRAMS:**

Clinic/Program: **FrancoForme**  
University of Ottawa Heart Institute (UOHI)  
40 Ruskin Street, Ottawa, ON K1Y 4W7  
Tel: 613-798-5555 ext. 19270 Fax: 613-761-5336  
Satellite Locations: various sites across the region  

**Description:**  
• 3-month program  
• Tailored program emphasizing heart healthy lifestyle  
• Coronary risk factor assessment  
• Total of 15 appointments, approximately 30 minutes each  
• 3 appointments at UOHI, remainder by phone  
• Individual home exercise program - no supervised exercise sessions  
• Follow-up evaluation scheduled at 3 and 12 months  

**Appropriate for:** Franco-Ontarians living in the Champlain region at risk for CVD and those with diagnosed heart disease.  
**Hours:** By appointment. Initial assessment conducted face-to-face; or via Telehealth from any regional hospital all other contacts delivered via telephone by appointment.  
**Language:** French only  
**Cost:** N/A  
**Referral:** Physician referral required. Download referral form: www.francoforme.ca
Clinic/Program: Heart Wise Exercise
University of Ottawa Heart Institute
40 Ruskin Street, Ottawa, ON K1Y 4W7
Tel: 613-761-5240
Email: heartwise@ottawaheart.ca
For locations, visit the UOHI website: www.heartwiseexercise.ca or www.ottawaheart.ca/UOHI/doc/HeartWise.pdf
Description: Exercise programs in the Ottawa and Champlain Region at various recreation facilities. Heart Wise exercise programs meet criteria set by the University of Ottawa Heart Institute (UOHI) and community partners ensuring the programs are appropriate for people with heart disease.
Appropriate for: People concerned about their heart health; with or without heart disease
Hours: Vary by program
Language: English, French
Cost: Varies
Referral: Approval by a physician is required before being accepted into a Heart Wise Program.

Clinic/Program: Heart Delicious Nutrition Workshops
Prevention and Wellness Centre (PWC)
University of Ottawa Heart Institute
40 Ruskin Street, Ottawa, ON K1Y 4W7
Tel: 613-761-4753 or 1-866-399-4432
Website: http://www.ottawaheart.ca/content_documents/2011_-_Jul-Aug_ENG.pdf
Description: ABCs to Heart Healthy Eating: Develop the skills for heart healthy eating to reduce or control your blood cholesterol. Learn how to read food labels and get the facts on fat, cholesterol, fiber and salt.
Heart Healthy Eating with Diabetes: Get the lowdown on meal planning, managing your diabetes and heart healthy eating. For people wishing to control or prevent diabetes.
French Workshop – Healthy Eating from A to Z: Offered only in French. Learn how to read food labels and get the facts on fat, cholesterol, fiber and salt.
Nutrition Tips for Weight Management: Learn to set realistic goals for healthy weight management. Acquire the skills to develop balanced meals, portion sizes and techniques for weight loss and maintenance.
Appropriate for: Patients, families, or members of the public who want to learn more about healthy nutrition
Hours: Refer to schedule online or contact PWC for details.
Language: English, French
Cost: N/A
Referral: Registration required by telephone
Clinic/Program: Cœur À Coeur
Centre de Santé Communautaire de L’Estrie
Crysler : Tel : 613-987-2683
Bourget : Tel : 613-487-1802
Alexandria : Tel : 613-525-5544
Cornwall : Tel : 613-937-2683

Description: Un programme d’éducation et de soutien pour les personnes souffrant de maladies cardiaques telles que l’angine, l’infarctus ou ayant eu une chirurgie au coeur, ainsi que les membres de leur famille. Il y a huit rencontres pour discuter du coeur, d’alimentation, de médicaments, d’activités physiques, des émotions et du stress.

Appropriate for: Patients with recent myocardial infarction, acute coronary syndrome, recent PCI and/ or Bypass surgery and their family members.

Hours: Vary
Language: French
Cost: N/A
Referral: Self-referral

NOTES
DIABETES MELLITUS

DIAGNOSIS OF DIABETES

Screen every 3 years in individuals ≥ 40 years of age. Screen earlier and/or more frequently in people with additional risk factors for diabetes.

- If FPG < 5.6 mmol/L
  - No risk factors
  - Fasting value <6.1 mmol/L
  - and 2-h value <7.8 mmol/L
  - Normal

- If FPG ≥ 7.0 mmol/L
  - Casual PG ≥ 11.1 mmol/L
  - 2hPG in a 75 g OGTT ≥ 11.1 mmol/L
  - Diabetes

- If FPG 5.6-6.0 mmol/L
  - OR
  - A1c 6.0 – 6.4 %
  - IFG

- If FPG 6.1-6.9 mmol/L
  - OR
  - A1c 6.0 – 6.4 %
  - IRG

- If FPG ≥ 7.0 mmol/L
  - OR
  - A1c 6.5 %

- Consider 75-g OGTT

Management of Pre-diabetes
- Implement a structured program of lifestyle modification that includes moderate weight loss and regular physical activity.
- In individuals with IGT, consider a biguanide (metformin) or an alpha-glucosidase inhibitor.

Management of Diabetes

- Screen earlier and/or more frequently in people with additional risk factors for diabetes.

IFG = impaired fasting glucose
IGT = impaired glucose tolerance
OGTT = oral glucose tolerance test
PG = plasma glucose

DIABETES MELLITUS


* If, despite a normal FPG, an OGTT is subsequently performed & the 2-h value is 7.8-11.0 mmol/L, a diagnosis of isolated IGT is made.
† Prediabetes = isolated IFG, isolated IGT, IFG and IGT.
‡ A confirmatory laboratory glucose test (either an FPG, a casual PG or a 2-h in a 75-g OGTT or A1c) must be on another day in all cases in the absence of unequivocal hyperglycemia accompanied by acute metabolic decompensation.
### MANAGEMENT OF DIABETES

<table>
<thead>
<tr>
<th>RISK FACTOR</th>
<th>TARGET</th>
<th>PRACTICE RECOMMENDATIONS</th>
</tr>
</thead>
</table>
| Self-management education | All individuals referred to Diabetes education programs that are tailored to enhance self-care practices | • Refer individuals with diabetes to self-management, diabetic education programs at diagnosis and as required – see Community Resources.  
• Refer all newly diagnosed diabetics to nutrition counselling by a registered dietitian. |
| Smoking                | Smoke-free                                                            | See Smoking Cessation Guideline.  
• Ask about tobacco use status at every visit.  
• Advise every tobacco user to quit.  
• Assess the tobacco user’s willingness to quit.  
• Assist by individual or group counselling and pharmacotherapy.  
• Arrange follow up, referral to specialized programs or community programs.  
• Urge avoidance of exposure to environmental tobacco smoke at work and home. |
| Physical Activity      | 30 – 60 minutes moderate to vigorous intensity aerobic exercise, 5 – 7 days/week; Resistance exercise 3 times/week | • Encourage brisk walking on most days of the week, supplemented by an increase in daily lifestyle activities. Identify problems/ barriers to starting and maintaining an exercise program and discuss possible solutions.  
• Refer to suitable community program for initial instruction and periodic supervision. |
| Weight Management      | BMI: 18.5 – 24.9 kg/m²  
Waist circumference:  
Men <102 cm (40’’);  
Women <88 cm (35’’)  
Start with targeting weight loss of 5 – 10% of body weight. | See Obesity and Weight Management Recommendations  
• Assess BMI and/ or waist circumference (see Appendix B for instructions on proper waist line measurement).  
• Discuss weight issues with patients who are outside of the BMI and waist circumference limits.  
• Encourage weight maintenance or reduction through appropriate balance of physical activity, caloric intake.  
• Refer to behavioural programs as necessary. |
| Hypertension           | <130/80 mmHg                                                          | See Hypertension Guideline  
• Assess BP every 3 to 6 months.  
• Ensure patient knows his/ her BP values and targets.  
• Initiate or maintain lifestyle modification.  
• Add BP medication as needed to achieve targets. |
| Dyslipidemia           | LDL-C <2 mmol/L or a 50% decrease in LDL-C; TC/ HDL-C ratio <4         | See Dyslipidemia Guideline  
• Assess fasting lipid profile in all patients every 1 to 3 years as indicated.  
• Ensure patient knows his/ her lipid values and targets.  
• If required, initiate LDL-lowering drug therapy.  
• Ensure adequate titration to achieve targets.  
• Start recommended dietary therapy.  
• Promote daily physical activity and weight management.  
• After obtaining required target, recheck annually. |
<table>
<thead>
<tr>
<th>RISK FACTOR</th>
<th>TARGET</th>
<th>PRACTICE RECOMMENDATIONS</th>
</tr>
</thead>
</table>
| Glycemic Control | HbA1c < 7.0%            | • To achieve target, aim for:  
  • BG = 4.0 – 7.0 mmol/L before meals; and,  
  • BG = 5.0 – 10.0 mmol/L after meals (5.0 – 8.0 mmol/L if not meeting HbA1c target).  
  • Glycemic control assessed every 3 – 6 months or as clinically indicated.  
  • Consider using medical directives to maximize RN/ RD scope of practice.  
  • Initiate pharmacotherapy (page 76):  
    • Concomitantly with lifestyle management if patient has marked hyperglycemia (HbA1c >9%); and,  
    • Within 2 – 3 months if glycemic targets not achieved with lifestyle management, adjust pharmacotherapy to attain HbA1c within 6 – 12 months. |
|                  | Consider targeting      |                                                                                                                                                    |
|                  | HbA1c ≤ 6.5% to lower   |                                                                                                                                                    |
|                  | risk of nephropathy     |                                                                                                                                                    |
|                  | (if possible without   |                                                                                                                                                    |
|                  | hypoglycemia)           |                                                                                                                                                    |
| Nephropathy      | ACR:                    | See Chronic Kidney Disease (CKD) Recommendations  
  Men: <2.0 mg/mmol  
  Women: <2.8 mg/mmol  
  eGFR: >60 ml/min/1.73 m²  
  • Screen at diagnosis and annually with ACR and eGFR; repeat if targets exceeded.  
  • If persistent albuminurea (ACR >2.0 mg/mmol in males, >2.8 mg/mmol in females), prescribe ACE inhibitor or ARB to delay progression, even in the absence of hypertension.  
  • Monitor ACR and eGFR at least every 6 months. |
|                  | ASA 81 – 325 mg daily   |                                                                                                                                                    |
|                  | in people with stable   |                                                                                                                                                    |
|                  | CVD                     |                                                                                                                                                    |
| ACE Inhibitors/  | In individuals considered|                                                                                                                                                    |
| ARB              | high risk for CVD       |                                                                                                                                                    |
| Influenza        | Annually                |                                                                                                                                                    |
| Vaccinations     |                         |                                                                                                                                                    |
| Neuropathy       | Screen using 10 g       |                                                                                                                                                    |
|                  | monofilament or 128-Hz  |                                                                                                                                                    |
|                  | tuning fork             |                                                                                                                                                    |
|                  |                          | • Intensify glycemic control to prevent the onset and progression of neuropathy.                                                                       |
| Retinopathy      | Eye Examination         | • Refer to expert professional for screening and evaluation for diabetic retinopathy at least every 1 – 2 years.                                                                                       |
| Foot Care        | Foot Examination        | • Refer to specialty clinic when the management of the patient exceeds the comfort level of the family physician.                                                                                     |
| Referral         | Speciality Clinic       |                                                                                                                                                    |
MANAGEMENT OF HYPERGLYCEMIA IN TYPE 2 DIABETES

Clinical Assessment

If:

- **HbA1c <9%**
  - Initiate metformin
  - Improved glycemic control

- **HbA1c ≥9%**
  - Initiate pharmacotherapy immediately without waiting for effect from lifestyle interventions:
    - Consider initiating metformin concurrently with another agent from a different class; or,
    - Initiate insulin.

- **Symptomatic hyperglycemia with metabolic decompensation**
  - Initiate insulin ± metformin

If not at target:

Add an agent best suited to the individual based on the advantages/disadvantages listed below.

<table>
<thead>
<tr>
<th>Class</th>
<th>HbA1c</th>
<th>Hypoglycemia</th>
<th>Other Advantages</th>
<th>Other Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha-glucosidase</td>
<td>↓</td>
<td>Rare</td>
<td>Improved postprandial control</td>
<td>GI side effects</td>
</tr>
<tr>
<td>inhibitor</td>
<td></td>
<td></td>
<td>Weight neutral</td>
<td></td>
</tr>
<tr>
<td>Incretin agent: DPP-4</td>
<td>↓ to ↓</td>
<td>Rare</td>
<td>Improved postprandial control</td>
<td>New agent (unknown long-term safety)</td>
</tr>
<tr>
<td>inhibitor</td>
<td></td>
<td></td>
<td>Weight neutral</td>
<td></td>
</tr>
<tr>
<td>Insulin</td>
<td>↓ ↓</td>
<td>Yes</td>
<td>No dose ceiling</td>
<td>Weight gain</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Many types, flexible regimens</td>
<td></td>
</tr>
<tr>
<td>Insulin secretagogue</td>
<td>↓ to ↓</td>
<td>Yes*</td>
<td>Improved postprandial control</td>
<td>Requires TID to QID dosing</td>
</tr>
<tr>
<td>- Meglitinide</td>
<td></td>
<td>Yes</td>
<td>Newer sulfonylureas (gliclazide, glimepiride) are</td>
<td>Weight gain</td>
</tr>
<tr>
<td>- Sulfonylurea</td>
<td></td>
<td></td>
<td>associated with less hypoglycemia than glyburide</td>
<td></td>
</tr>
<tr>
<td>TZD</td>
<td>↓ ↓</td>
<td>Rare</td>
<td>Durable monotherapy</td>
<td>Requires 6 – 12 weeks for maximal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>effect</td>
</tr>
<tr>
<td>Weight loss agent</td>
<td>↓</td>
<td>None</td>
<td>Weight loss</td>
<td>GI side effects (orlistat)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Increased heart rate/ BP (sibutramine)</td>
</tr>
</tbody>
</table>

If not at target:

- Add another drug from a different class; or,
- Add bedtime basal insulin to other agent(s); or,
- Intensify insulin regimen.

Timely adjustments to and/or addition of antihyperglycemic agents should be made to attain target HbA1c within 6 – 12 months.

HbA1c = glycated hemoglobin  DPP-4 = dipeptidyl peptidase-4
BP = blood pressure          GI = gastrointestinal
CHF = congestive heart failure  TZD = thiazolidinedione
↓ = <1.0% decrease in HbA1c  ↓↓ = 1.0–2.0% decrease in HbA1c
↓↓↓ = >2.0% decrease in HbA1c
* Less hypoglycemia in the context of missed meals
## Anti-hyperglycemic agents for use in type 2 diabetes

<table>
<thead>
<tr>
<th>Class</th>
<th>Brand Name</th>
<th>Expected ↓ in HbA1c with Mono-therapy</th>
<th>Hypoglycemia</th>
<th>Other Therapeutic Considerations</th>
</tr>
</thead>
</table>
| **Alpha-glucosidase inhibitor** | Acarbose (Glucobay)   | ↓                                     | Negligible risk as monotherapy | • Not recommended as initial therapy in people with marked hyperglycemia (HbA1c ≥9).
|                              |                       |                                       |                    | • Often used in combination with other oral antihyperglycemic agents.                              |
|                              |                       |                                       |                    | • Weight neutral as monotherapy.                                                                   |
|                              |                       |                                       |                    | • GI side effects.                                                                                 |
| **Incretin agent**           | DPP-4 inhibitor       | ↓                                     | Negligible risk as monotherapy | • Weight neutral.                                                                                  |
|                              | Sitagliptin (Januvia) |                                       |                    | • Improved postprandial control.                                                                   |
|                              |                       |                                       |                    | • Neuer agent with unknown long-term safety.                                                       |
| **Insulin**                  | Rapid-acting analogues: |                                         |                    | • Potentially greatest HbA1c reduction and no maximal dose.                                       |
|                              | Aspart (NovoRapid)    |                                       | Significant risk   | • Numerous formulations and delivery systems (including subcutaneous-injectable) allow for regimen flexibility. |
|                              | Glulisine (Apidra)    |                                       |                    | • Hypoglycemia risk highest with regular and NPH insulin.                                         |
|                              | Lispro (Humalog)      |                                       |                    | • When initiating insulin, consider adding bedtime intermediate-acting insulin or long-acting insulin analogue to daytime oral antihyperglycemic agents (although other regimens can be used). |
|                              |                       |                                       |                    | • Intensive insulin therapy regimen recommended if above fails to attain glycemic targets.         |
|                              |                       |                                       |                    | • Increased risk of weight gain relative to sulfonylureas and metformin.                          |
|                              |                       |                                       |                    | • Weight neutral.                                                                                  |
| **Sulfonylureas**            | Gliclazide (Diamicron, Diamicron MR, generic) | ↓ ↓                                      | 1. Minimal/moderate risk | • Relatively rapid BG-lowering response.                                                           |
|                              | Glimepiride (Amaryl)  |                                      | 2. Moderate risk   | • All insulin secretagogues reduce glycemia similarly (except nateglinide, which is less effective). |
|                              | Glyburide (Diabeta, Euglucon, generic) | ↓ ↓                                      | 3. Significant risk | • Postprandial glycemia is especially reduced by nateglinide and repaglinide.                    |
|                              |                       |                                       |                    | • Hypoglycemia and weight gain are especially common with glyburide.                              |
|                              |                       |                                       |                    | • Consider using other classes of antihyperglycemic agents first in patients at high risk of hypoglycemia (e.g. the elderly, renal/ hepatic failure). |
|                              |                       |                                       |                    | • If a sulfonylurea must be used in such individuals, gliclazide is associated with the lowest incidence of hypoglycemia (e.g. the elderly, renal/ hepatic failure). |
|                              |                       |                                       |                    | • Nateglinide and repaglinide are associated with less hypoglycemia than glyburide.               |
|                              |                       |                                       |                    | • Gliclazide is associated with the lowest incidence of hypoglycemia (e.g. the elderly, renal/ hepatic failure). |
|                              |                       |                                       |                    | • Glimepiride is associated with less hypoglycemia than glyburide.                                |
|                              |                       |                                       |                    | • Nateglinide and repaglinide are associated with less hypoglycemia than glyburide.               |
| **Metformin**                | Glucophage, Glumetza, generic | ↓                                      | Negligible risk as monotherapy | • Improved cardiovascular outcomes in overweight subjects.                                        |
|                              |                       |                                       |                    | • Contraindicated if eGFR <30 ml/min or hepatic failure.                                          |
|                              |                       |                                       |                    | • Caution if eGFR <60 ml/min.                                                                     |
|                              |                       |                                       |                    | • Weight neutral as monotherapy, promotes less weight gain when combined with other antihyperglycemic agents, including insulin. |
|                              |                       |                                       |                    | • GI side effects.                                                                                 |
| **TZDs**                     | Pioglitazone (Actos)  | ↓                                      | Negligible risk as monotherapy | • Longer duration of glycemic control with monotherapy compared to metformin or glyburide.      |
|                              | Rosiglitazone (Avandia) |                                      |                    | • Mild BP lowering.                                                                               |
|                              |                       |                                       |                    | • Between 6 and 12 weeks required to achieve full glyemic effect.                                 |
|                              |                       |                                       |                    | • Weight gain (waist-to-hip ratio not increased).                                                 |
|                              |                       |                                       |                    | • May induce edema and/or heart failure.                                                          |
|                              |                       |                                       |                    | • Avoid in patients with heart failure.                                                           |
|                              |                       |                                       |                    | • Higher rates of heart failure when combined with insulin.                                      |
|                              |                       |                                       |                    | • Rare occurrence of macular edema.                                                               |
|                              |                       |                                       |                    | • Rare occurrence of fractures in females.                                                         |
| **Weight loss agents**       | Orlistat ( Xenical) | ↓                                      | None               | • Promotes weight loss.                                                                           |
|                              | Sibutramine (Meridia) |                                       |                    | • Glycemic benefit may be limited to those who actually lose weight.                              |
|                              |                       |                                       |                    | • Orlistat can cause diarrhea and other GI side effects.                                         |
|                              |                       |                                       |                    | • Sibutramine can increase heart rate and BP.                                                     |
| **Combined formulations**    | Avandamet (metformin + rosiglitazone) | ↓                                      | Negligible risk as monotherapy | • See metformin, TZDs, and sulfonylureas.                                                         |
|                              | Avandaryl (glimepiride + rosiglitazone) | ↓                                      | Moderate risk      | • See metformin, TZDs, and sulfonylureas.                                                         |
COMMUNITY RESOURCES – DIABETES

For the most up-to-date listing of community resources, visit the Champlain Diabetes Regional Coordination Centre (DRCC) website at [www.champlaindrcc.ca](http://www.champlaindrcc.ca). The website is a resource for both people living with diabetes and healthcare providers in the Champlain region. It provides lists of services, tools and resources.

_H_ denotes hospital diabetes clinics  _H_ denotes diabetes education programs

CITY OF OTTAWA:

<table>
<thead>
<tr>
<th>Clinic/Program:</th>
<th>Community Diabetes Education Program of Ottawa  <em>H</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Locations across the City of Ottawa</td>
<td></td>
</tr>
<tr>
<td>South East Ottawa Community Health Centre</td>
<td>1355 Bank Street, Suite 600, Ottawa, ON K1H 8K7</td>
</tr>
<tr>
<td>Centretown Community Health Centre</td>
<td>420 Cooper St. Ottawa, ON K2P 2N6</td>
</tr>
<tr>
<td>Orleans-Cumberland Community Resource Centre</td>
<td>210 Centrum Blvd. - Suite 211 Orléans ON K1E 3V7</td>
</tr>
<tr>
<td>Overbrook-Forbes Community Resource Centre</td>
<td>120-225 Donald St., Ottawa, ON K1K 1N1</td>
</tr>
<tr>
<td>Pinecrest-Queensway Community Health Centre</td>
<td>1365 Richmond Rd. Ottawa, ON K2A 1T3</td>
</tr>
<tr>
<td>Nepean, Rideau &amp; Osgoode Community Resource Centre</td>
<td>1642 Merivale Road, Unit 541 Nepean, ON K2G 4A1</td>
</tr>
<tr>
<td>Western Ottawa Community Resource Centre 2</td>
<td>2, MacNeil Court Kanata, ON K2L 4H7</td>
</tr>
<tr>
<td>Hunt Club Riverside Community Resource Centre</td>
<td>3320 Paul Anka Drive Ottawa, ON K1V 0J9</td>
</tr>
<tr>
<td>South Nepean Satellite Community Health Centre</td>
<td>4100 Strandherd Drive, Suite 201 Ottawa, ON, K2J 0V2</td>
</tr>
<tr>
<td>Tel: 613-233-6655  Fax: 613-233-6713 (for physicians)</td>
<td></td>
</tr>
<tr>
<td>Web: <a href="http://www.diabeteseducation.ca">www.diabeteseducation.ca</a></td>
<td></td>
</tr>
</tbody>
</table>

**Description:** Programs held at various community health centres/resource centres throughout Ottawa. Group classes led by registered nurse and registered dietitian with a focus on general Diabetes information and nutrition:

- Pre-diabetes (one 3-hour class);
- Type 2 diabetes (three 2.5 hour classes); and
- Insulin initiation (individual and group classes): work with physician's orders for patients starting on insulin.

**Appropriate for:** Adults with pre-diabetes, type 2 diabetes, or new insulin diabetics.

**Hours:** Mon to Fri: 8:30 a.m. - 4:30 p.m.

Sessions: Morning, afternoon, and evening classes offered depending on location availability.

**Language:** English, French (Sessions in other languages or interpretation offered as needed, please indicate on referral form)

**Cost:** None

**Referral:** Physician referrals, other health care professional referrals and self-referrals

To refer: Physician send fax; include most recent test results and purpose of referral; coordinator will contact patient directly.

<table>
<thead>
<tr>
<th>Clinic/Program:</th>
<th>Bruyère Family Health Team - Diabetes Education Program  <em>H</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>75 Bruyère St. Ottawa, ON K1N 5C8</td>
<td></td>
</tr>
<tr>
<td>613-241-3344 ext. 361</td>
<td></td>
</tr>
</tbody>
</table>

**Appropriate for:** Adults with pre-diabetes, type 1 and 2 diabetes, gestational diabetes

**Language:** English, French

**Cost:** None

**Referral:** Physician referrals and self-referrals
Clinic/Program: The Ottawa Hospital - Foustanellas Endocrine and Diabetes Centre
Riverside Campus, 4th Floor, 1967 Riverside Drive, Ottawa, ON
Tel: 613-738-8400 ext. 88333 Fax: 613-738-8261
Web: http://www.ottawahospital.on.ca/wps/portal/Base/TheHospital/ClinicalServices/DeptPgrmCS/Programs/FoustanellasEndocrineDiabetesCentre/ForPatients/PatientEducationClasses

Description: The Ottawa Hospital multi-disciplinary Diabetes team provides integrated diabetes self-care education and medical management support to people with complex diabetes care needs. Care is provided by individualized, multi-disciplinary assessment and education; group education and follow-up; and, integration of education with clinical management.

Group Education Topics:
• 2-day diabetes education program for type 1 and type 2 diabetes

Appropriate for:
Patients with:
• Type 2 diabetes and/or multiple meds and/or chronic multi-system complication
• Type 1 diabetes
• Gestational diabetes

Hours:
Administration: Mon to Fri: 8:00 a.m. - 4:00 p.m.
Classes Wed & Thurs every other week

Language: English, French

Cost: N/A

Referral: Physician referral required.
Fax referral to clinic; include purpose of referral, recent lab work, and medication list.

Clinic/Program: The Ottawa Hospital, Civic Campus - Healthy Lifestyle and Diabetes Outreach Program
210 Melrose Avenue, Ottawa, ON K1Y 4K7
Tel: 613-798-5555 ext. 13512 Fax: 761-4417

Description: Free program that supports education and self-management for people with pre-diabetes and type 2 diabetes – daytime and evening programs available – services are provided by a Registered Nurse (RN) and/or Registered Dietitian (RD)

Appropriate for: Adults with pre-diabetes, type 2 diabetes

Hours: Daytime and evening programs available

Language: English

Cost: None

Referral: Physician referrals and self-referrals
**OTTAWA-EAST:**

| Clinic/Program: | Diabetes Clinic Hôpital Montfort  
Clinic/Program: | Wabano Centre for Aboriginal Health - Urban Aboriginal Diabetes Education Program |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>713 Montreal Rd., Suite 102, Ottawa, ON K1K 0T2</td>
<td>299 Montreal Rd., Ottawa, ON</td>
</tr>
<tr>
<td>Tel: 613-746-4621 ext. 3126 Fax: 613-748-4995</td>
<td>Tel: 613-748-0657 ext. 212 Fax: 613-748-9364</td>
</tr>
<tr>
<td>Description:</td>
<td>Web: <a href="http://www.wabano.com">www.wabano.com</a></td>
</tr>
<tr>
<td>Care and education provided to type 1, gestational diabetes, pre gestational diabetes and uncontrolled type 2 on insulin therapy or multiple medication with chronic complications. Individualized, interdisciplinary (RD, RN, pharmacist, psychologist) care available.</td>
<td>Description: Health promotion and primary prevention program for Aboriginal peoples. The program addresses:</td>
</tr>
</tbody>
</table>
| Appropriate for: Adults with type 1 or type 2 diabetes, pre-gestational diabetes, gestational diabetes | • Risk factors associated with diabetes;  
• The importance of diabetes screening;  
• Selection and preparation of a healthy, balanced diet; and,  
• A healthy, active, traditional lifestyle in the prevention of diabetes. |
| Hours: Mon to Fri: 7:30 a.m. - 3:30 p.m. | Appropriate for: Adults with pre-diabetes, type 2 diabetes |
| Language: French, English, Spanish | Hours: Mon to Fri: 9:00 a.m. - 5:30 p.m.; Classes offered weekly, day and evening. |
| Cost: N/A | Language: English |
| Referral: Physician referral required. Complete referral form and fax to clinic; inform patient that clinic will contact them directly with appointment date and time. Have patient re-contact clinic if they have not received their appointment within one week. | Cost: N/A |
| Referral: Physician referrals, other health care professional referrals and self-referrals | Referral: |

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**Clinic/Program:** Diabetes Clinic Hôpital Montfort  
713 Montreal Rd., Suite 102, Ottawa, ON K1K 0T2  
Tel: 613-746-4621 ext. 3126 Fax: 613-748-4995  
Description: Care and education provided to type 1, gestational diabetes, pre gestational diabetes and uncontrolled type 2 on insulin therapy or multiple medication with chronic complications. Individualized, interdisciplinary (RD, RN, pharmacist, psychologist) care available.  
Appropriate for: Adults with type 1 or type 2 diabetes, pre-gestational diabetes, gestational diabetes  
Hours: Mon to Fri: 7:30 a.m. - 3:30 p.m.  
Language: French, English, Spanish  
Cost: N/A  
Referral: Physician referral required. Complete referral form and fax to clinic; inform patient that clinic will contact them directly with appointment date and time. Have patient re-contact clinic if they have not received their appointment within one week.

**Clinic/Program:** Wabano Centre for Aboriginal Health - Urban Aboriginal Diabetes Education Program  
299 Montreal Rd., Ottawa, ON  
Tel: 613-748-0657 ext. 212 Fax: 613-748-9364  
Web: www.wabano.com  
Description: Health promotion and primary prevention program for Aboriginal peoples. The program addresses:  
• Risk factors associated with diabetes;  
• The importance of diabetes screening;  
• Selection and preparation of a healthy, balanced diet; and,  
• A healthy, active, traditional lifestyle in the prevention of diabetes.  
Appropriate for: Adults with pre-diabetes, type 2 diabetes  
Hours: Mon to Fri: 9:00 a.m. - 5:30 p.m.; Classes offered weekly, day and evening.  
Language: English  
Cost: N/A  
Referral: Physician referrals, other health care professional referrals and self-referrals.
Clinic/Program: East Ottawa Community Family Health Team - Diabetes Education Team
Primary site: 2339 Ogilvie Rd Suite 204 Ottawa
Tel: 613-842-7960 Fax: 613-842-4428

Satellite Sites:
3095 St Joseph Blvd. Orleans 2nd floor
Tel: 613-590-0533 Fax: 613-590-7351
225 Donald St. Suite 120 Ottawa,
Tel: 613-745-2228 Fax: 613-745-9520

Description: Group and individual sessions open to the public, for individuals with pre-diabetes and type 2 diabetes. Coordinated by a nurse and a dietitian specializing in diabetes.

Appropriate for: Adults with pre-diabetes or type 2 diabetes

Hours: Mon to Fri: 8:30 a.m. - 4:30 p.m.

Language: English, French

Cost: N/A

Referral: Physician referrals, other health care professional referrals and self-referrals

OTTAWA-WEST:

Clinic/Program: Queensway-Carleton Hospital - Diabetes Education Program/ Clinic
3045 Baseline Road, Ottawa, ON K2H 8P4
Tel: 613-721-4788 ext. 3763 Fax: 613-721-4787

Description: 2-day group program to help increase patients knowledge of diabetes management. Referral to endocrinologist. Classes include insulin intensification and heart health.

Appropriate for: Persons with pre-diabetes, type 1 or type 2 diabetes, gestational diabetes

Hours: Mon to Fri: 8:30 a.m. - 4:30 p.m.

Language: English

Cost: N/A

Referral: Physician referral required.
Call Patient Scheduling at 613-721-4788 and fax referral; include purpose for referral and most recent lab work; referring physician's office must notify patient of appointment time and date.

Clinic/Program: Ottawa South Diabetes Education Program and Support Team
Rideau Valley Health Services
1221 Greenbank Rd., Ottawa, Ontario K2J 5V7
Tel: 613-258-8714 Fax: 613-440-3238

Appropriate for: Adults with pre-diabetes or type 2 diabetes, insulin starts

Hours: Days and evenings (for schedule visit www.rvhc.va)

Language: English, French, Arabic

Cost: N/A

Referral: Physician referrals and self-referrals
Clinic/Program: Carleton Place and District Memorial Hospital
211 Lake Avenue East, Carleton Place, ON K7C 1J4
Tel: 613-257-2200 ext. 817 Fax: 613-257-5197

Description: The program consists of an individual assessment with a Registered Nurse (RN) and Registered Dietitian (RD), which lasts ~1.5 hours, normally on the 3rd Thursday of the month. The program also includes a group session conducted by a multi-disciplinary education team (RN, RD, physiotherapist, pharmacist and chiropodist), which lasts a full day from 10 a.m. to 4 p.m., normally on the 4th Thursday of the month. Patients are followed up on an individual basis, with any member of the team, as needed (normally on the 4th Thursday of the month).

Appropriate for: Adults with pre-diabetes, type 2 diabetes, gestational diabetes

Hours: See program description

Language: English

Cost: N/A

Referral: Physician referral required

EASTERN COUNTIES:

Clinic/Program: Akwesasne - Diabetes Education Program
Box 579, Cornwall, ON K6H 5T3
613-575-2341

Description: Diabetes management education program with group and individual counselling. Home visits available. Once a month diabetes clinic with endocrinologist. Health Team include Registered RN and Registered dietician, both are Certified Diabetes Educators. Referral is available to on-site chiropodist. Smoking cessation program is also available.

Appropriate for: Adults with pre-diabetes, type 2 diabetes

Hours: N/A

Language: English

Cost: None

Referral: Physician referrals, other health care professional referrals and self-referrals

Clinic/Program: Hawkesbury & District General Hospital - Diabetes Clinic
1111 Ghislain Street, Hawksbury, ON
Tel: 613-632-1111 ext. 482 Fax: 613-636-6194

Description: In collaboration with the family doctor, a nurse and dietitian offer to individuals with diabetes, the support needed to understand diabetes, to better control glucose (blood sugar) levels and to reduce the long-term complications of the disease. The diabetes educators see patients in individual consultation and/or in group education. Sessions: “http://www.hawkesburyhospital.com/ServicesPrograms/Pages/DiabetesClinic.aspx”

Appropriate for: Persons with glucose intolerance, adults with pre-diabetes, type 1 or type 2 diabetes

Hours: Mon to Fri: 8:00 a.m. - 4:30 p.m.

Language: English, French

Cost: N/A

Referral: Physician referrals, other health care professional referrals and self-referrals
Clinic/Program: **Winchester District Memorial Hospital (WDMH) - Diabetic Clinic**
566 Louise Street, Winchester, ON
Tel: 613-774-2422 ext. 6765

Description: The Diabetes Education Program (DEP) offers many different education sessions for individuals with both diabetes and pre-diabetes. The focus is on how to live well with Diabetes. Programs cover all aspects of living well with Diabetes and are offered on various days and times.

Appropriate for: Adults with pre-diabetes, type 1 or 2 diabetes

Hours: Call for schedule

Language: English

Cost: N/A

Referral: Physician referrals, other health care professional referrals and self-referrals

Clinic/Program: **Programme d'éducation au diabète**
Centre de Santé Communautaire de L'Estrie
Cornwall (main)
841, rue Sydney, Unité 6 (ON) K6H 3J7
Tel: 613 937-2683  Fax: 613 937-2698

Alexandria
280, boulevard Industriel (ON) K0C 1A0
Tel: 613 525-5544  Fax: 613 525-3991

Bourget
2081, rue Laval (ON) K0A 1E0
Tel: 613 487-1802   Fax: 613 487-4182

Crysler
1, rue Nation (ON) K0A 1R0
Tel: 613 987-2683  Fax: 613 987-9908

Embrun
738, rue Notre-Dame (ON) K0A 1W1
Tel: 613 443-3888 Fax: 613 443-9519

Description: 1-day workshop where a nurse and a dietician offer to individuals with diabetes, the support needed to understand diabetes, to better control glucose (blood sugar) levels and to reduce the long-term complications of the disease. Workshop is followed by an initial one-on-one visit of 45 minutes and 3 follow-ups of 40 minutes at 1, 3, and 6 months.

Appropriate for: Pre-diabetic with abnormal test results and Type 2 diabetic

Hours: Vary (locations across five counties based on demand)

Language: French, English

Cost: N/A

Referral: Physician referrals, other health care professional referrals and self-referrals
**Clinic/Program:** Cornwall Community Hospital - Diabetes Education Centre  
510 Second Street East, Cornwall, ON K6H 1Z6  
Tel: 613-936-4615  

**Description:** 3-hour initial workshop where a nurse and a dietician offer to individuals with Diabetes, the support needed to understand Diabetes, to better control glucose (blood sugar) levels and to reduce the long-term complications of the disease. Workshop is followed by a scheduled one-on-one visit of 60 minutes with a health educator and various educational workshops.  

**Appropriate for:** Children and adults with pre-diabetes with abnormal test results and type 2 diabetes  
**Hours:** Initial workshop is offered twice per month  
**Language:** English (mainly), French  
**Cost:** N/A  
**Referral:** Self-referral or physician referral

**Clinic/Program:** Seaway Valley Community Health Centre - Diabetes Education Program  
353 Pitt Street, Cornwall, ON K6J 3R1  
Tel: 613-936-0306 Fax: 613-936-0521  

**Description:** If you have pre-diabetes or just discovered you have diabetes, learn how to live a healthy life. The sessions are led by a Registered Nurse and a Registered Dietician.  

**Appropriate for:** Anyone diagnosed with diabetes  
**Hours:** To register, call Nancy, Health Educator/Promoter at: (613) 936-0306 ext. 151  
**Language:** English  
**Cost:** N/A  
**Referral:** Self-referral

**RENFREW COUNTY & DISTRICT:**

**Clinic/Program:** Pembroke Regional Hospital - Diabetes Education Program  
705 Mackay Street, Pembroke, ON  
Tel: 613-732-3675 ext. 6151 or Toll free: 1-855-293-7838  
**Satellite Locations:**  
Arnprior and District Memorial Hospital, 350 John St. N.  
Deep River & District Hospital, 117 Banting Dr.  
Renfrew Victoria Hospital, 499 Raglan St. N.  
St. Francis Memorial Hospital (Barry’s Bay), 7 Francis Memorial Dr.  

**Description:** Group classes held 3x monthly and individual appointments offered remaining week days. Monthly telehealth clinics held with endocrinologists from TOH.  
Outreach clinics & community screening/education offered weekly across various sites in Renfrew County i.e. Eganville, Golden Lake, Killaloe, Cobden/ Beachburg, Petawawa & others as requested.  

**Appropriate for:** Children and adults with pre-diabetes, type 1 or 2 diabetes, gestational diabetes, family members, and caregivers  
**Hours:** Mon to Fri: 8:00 a.m. – 4:00 p.m. & evening scheduling as required.  
**Language:** English, French  
**Cost:** N/A  
**Referral:** Physician referrals, other health care professional referrals and self-referrals
LEEDS, LANARK & GRENVILLE

Clinic/Program: Kemptville District Hospital
2675 Concession Rd. Kemptville, ON K0G 1J0
Tel: 613-258-6133 ext. 400 Fax: 613-258-4997
Website: www.kdh.on.ca/serv_7_e.html

Description:
Diabetes Education Program: Includes a 2-hour individual assessment with the nurse and dietitian, a 2-day group education session and follow up appointments, as needed. Group sessions offered the first Wednesday and Thursday of each month.
Diabetes Prevention Program: Includes a 1/2-day group education session. The basics of Diabetes are reviewed along with risk factors for Diabetes. Offered about every 3 months.
Insulin and Diabetes Program: Includes a 1/2-day group education session. Topics include all aspects of the self administration of insulin including treatment of hypoglycemia, carbohydrate counting, healthy lifestyle, driving and sick day guidelines among other topics. Offered as needed.
Insulin Initiation: Includes one-on-one counselling sessions with the nurse and dietitian. Learn everything you need to know about how to use insulin safely. Also learn how to manage your blood sugars with insulin therapy. Offered as needed. A physician referral is required.

http://www.kdh.on.ca/ev_diabetes_e.html for schedule of classes

Appropriate for:
Diabetes Education Program: Adults diagnosed with Diabetes; people who have not been to a Diabetes education program before; or, people who have gone 3 to 5 years since their last Diabetes education program.
Diabetes Prevention Program: Adults diagnosed with Impaired Fasting Glucose (IFG) and/ or Impaired Glucose Tolerance (IGT) or at high risk for developing Diabetes.
Insulin and Diabetes Program: Adults who have recently started insulin therapy or who require an update on the treatment of Diabetes with insulin.
Insulin Initiation: For adults who need to start insulin.

Hours: Weekdays
Language: English
Cost: N/A

Diabetes Clinic Referral form: http://www.kdh.on.ca/pdfs/DEP-Referral2010.pdf
Clinic/Program: **Rideau Valley Diabetes Services**

2 Gould Street, Unit 118, Smiths Falls, ON K7A 5C7  
Tel: 613-284-2558 or 1-877-321-4500  Fax: 613-284-2591  
2479 Parkedale Ave, Unit 2, Brockville, ON K6V 3H2  
Tel: 613-498-1555  Fax: 613-498-9922  
Email: diabetes.rvds@mdchc.on.ca  
Website: www.rvds.ca

Description: Provides accessible services to assist people affected by type 1, and type 2 diabetes or pre-diabetes to develop their knowledge, strengths, and skills to live healthy lives. Partners with other healthcare providers to offer coordinated diabetes prevention, education, and management services in Lanark, Leeds, and Grenville counties. Offers group education programs for diabetes and pre-diabetes, individual counselling, multi-disciplinary clinics, support groups, and other events such as grocery store tours, cooking classes, conferences, and training for health care professionals.

Appropriate for: Adults with pre-diabetes, type 1 or 2 diabetes.

Hours:  
Mon to Fri: 8:30 a.m. - 4:30 p.m Brockville Office,  
Mon, Tues, Thurs: 8:30 a.m. - 4:30 p.m, Wed: 8:30 a.m. - 8:30 p.m and Fri: 8:30 a.m. - 12:00 p.m

Language: English

Cost: N/A

Referral: Physician referrals, other health care professional referrals, self-referrals
FOOT CARE SERVICE PROVIDERS

Please visit www.champlaindrcc.ca for the most up-to-date listing of foot care service providers. The Champlain DRCC does not endorse or promote any specific foot care service, and lists only professionally designated services in the region. Ministry funded foot care services require a referral and must meet some requirements. Private funded foot care services charge a fee (between $24-45 depending on treatment needs) and can be self-referred.

### OTTAWA EAST

<table>
<thead>
<tr>
<th>Service Provider</th>
<th>Address</th>
<th>Telephone</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIM Health Group</td>
<td>1605 Orléans Blvd. Ottawa</td>
<td>1-866-640-3668</td>
<td>Yes</td>
</tr>
<tr>
<td>Ampos Orthopaedics</td>
<td>631 Montreal Rd., Ottawa</td>
<td>613-745-3173</td>
<td>Yes</td>
</tr>
<tr>
<td>Bruyere Foot Specialists</td>
<td>311 McArthur Ave. Ottawa</td>
<td>613-562-6357</td>
<td>Yes</td>
</tr>
<tr>
<td>Carefor Health &amp; Community Services</td>
<td>760 Belfast Rd. Ottawa</td>
<td>613) 749-7557</td>
<td>Yes</td>
</tr>
<tr>
<td>Cumberland Home Support</td>
<td>1515 Tenth Line Rd. Ottawa</td>
<td>613-741-6025 x 141</td>
<td>Yes</td>
</tr>
<tr>
<td>Eastern Ottawa Resource Centre</td>
<td>2339 Ogilvie Rd. Gloucester</td>
<td>613-741-3556</td>
<td>Yes</td>
</tr>
<tr>
<td>Gloucester Senior Adults’ Centre</td>
<td>2020 Ogilvie Rd. Ottawa</td>
<td>613-749-1947</td>
<td>Yes</td>
</tr>
<tr>
<td>Orleans Family Care Physicians</td>
<td>18-6469 Jeanne d’Arc Blvd. Ottawa</td>
<td>613-841-8500</td>
<td>Yes</td>
</tr>
<tr>
<td>Orleans Foot Clinic</td>
<td>1605 Orléans Blvd. Ottawa</td>
<td>613-863-3668</td>
<td>Yes</td>
</tr>
<tr>
<td>Orleans Medical Centre Inc</td>
<td>406-2555 St Joseph Blvd. Orleans</td>
<td>613-830-1771</td>
<td>Yes</td>
</tr>
<tr>
<td>Wabano Centre For Aboriginal Health</td>
<td>299 Montreal Rd. Ottawa</td>
<td>613-748-5999</td>
<td>No</td>
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</table>

### OTTAWA WEST

<table>
<thead>
<tr>
<th>Foot Care Provider</th>
<th>Address</th>
<th>Telephone</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Foot Care</td>
<td>1108 Klondike Rd. Kanata</td>
<td>613-254-9777</td>
<td>Yes</td>
</tr>
<tr>
<td>Amberwood Chiropractic Office</td>
<td>1261 Main St. N. Stittsville</td>
<td>613-447-3781</td>
<td>Yes</td>
</tr>
<tr>
<td>Westend Family Care Clinic</td>
<td>80 Michael Cowpland Kanata</td>
<td>613-599-3321</td>
<td>Yes</td>
</tr>
<tr>
<td>Back On Track Physiotherapy Centre</td>
<td>380 Hunt Club Rd. Ottawa</td>
<td>613-521-5215</td>
<td>Yes</td>
</tr>
<tr>
<td>Back on Track Physiotherapy and Sports Injury</td>
<td>5492 B South River Dr. Manotick</td>
<td>613-692-1572</td>
<td>Yes</td>
</tr>
<tr>
<td>Bridlewood Medical Centre Physiotherapy</td>
<td>64 Stonehaven Dr. Kanata</td>
<td>613-599-9039</td>
<td>Yes</td>
</tr>
<tr>
<td>Care Medics</td>
<td>1160 Beaverwood Rd. Manotick</td>
<td>613-692-0244</td>
<td>Yes</td>
</tr>
<tr>
<td>College Square Medical Centre</td>
<td>1980 Baseline Road Ottawa</td>
<td>1-866-640-3668</td>
<td>Yes</td>
</tr>
<tr>
<td>David Kerbl D Ch</td>
<td>10 Pine Bluff Trail, Stittsville</td>
<td>613-863-3668</td>
<td>Yes</td>
</tr>
<tr>
<td>Elderhealth Resources Inc</td>
<td>26 Tower Rd. Nepean</td>
<td>613-733-8405</td>
<td>Yes</td>
</tr>
<tr>
<td>Royal Canadian Legion</td>
<td>70 Hines Rd. Kanata</td>
<td>613-591-5570</td>
<td>Yes</td>
</tr>
<tr>
<td>Life Source Medical Centre</td>
<td>130 Robertson Rd. Ottawa</td>
<td>613-828-6443</td>
<td>Yes</td>
</tr>
<tr>
<td>Loppe Foot Care Service</td>
<td>1453 Woodroffe Ave. Nepean</td>
<td>613-225-8195</td>
<td>Yes</td>
</tr>
<tr>
<td>Med Team Clinic</td>
<td>99 Kakulu Rd. Kanata</td>
<td>613-592-1448</td>
<td>Yes</td>
</tr>
<tr>
<td>Nepean Sports Medicine Physiotherapy</td>
<td>1701 Woodroffe Ave. Nepean</td>
<td>613-727-5755</td>
<td>Yes</td>
</tr>
<tr>
<td>Olde Forge Seniors Support Service</td>
<td>2730 Carling Ave. Ottawa</td>
<td>613-829-9777</td>
<td>Yes</td>
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<tr>
<td>Foot Care Provider</td>
<td>Address</td>
<td>Telephone</td>
<td>Fee</td>
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</tr>
<tr>
<td>Ottawa West Community Support</td>
<td>1137 Wellington St W Ottawa</td>
<td>613-728-6016</td>
<td>Yes</td>
</tr>
<tr>
<td>Rideau Community Health Services</td>
<td>1128 Mill St. Manotick,</td>
<td>613-692-4697</td>
<td>Yes</td>
</tr>
<tr>
<td>Sole To Soul Foot Care &amp; Reflexology</td>
<td>13 Marielle Court Ottawa</td>
<td>613- 722-2481</td>
<td>Yes</td>
</tr>
<tr>
<td>Stittsville Physiotherapy</td>
<td>1110 Carp Stittsville</td>
<td>613-836-4676</td>
<td>Yes</td>
</tr>
<tr>
<td>West Carleton Senior Residence</td>
<td>518 Donald B Munro Dr. Carp</td>
<td>613-839-5729</td>
<td>Yes</td>
</tr>
<tr>
<td>Western Ottawa Community Resource Centre</td>
<td>3865 Richmond Rd. Ottawa</td>
<td>613-829-1133</td>
<td>Yes</td>
</tr>
<tr>
<td>Pamela McLeod Upstanding Foot care</td>
<td>412 Grey Seal Circle Ottawa</td>
<td>613-324-5423</td>
<td>Yes</td>
</tr>
<tr>
<td>Community Chiropody Program (Healthy Steps Pedorthic Clinic)</td>
<td>4100 Strandherd Dr. Nepean</td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

**OTTAWA CENTRAL**

<table>
<thead>
<tr>
<th>Foot Care Provider</th>
<th>Address</th>
<th>Telephone</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Douglas Smith</td>
<td>1919 Riverside Dr. Ottawa</td>
<td>613-260-2684</td>
<td>Yes</td>
</tr>
<tr>
<td>AIM Health Group: Foot Therapy</td>
<td>326 Shellbrook Way Ottawa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activecare Medical Clinic</td>
<td>Carlingwood Mall Ottawa</td>
<td>613-260-2684</td>
<td>Yes</td>
</tr>
<tr>
<td>Activecare Medical Clinic</td>
<td>2121 Carling Ave. Ottawa</td>
<td>613-761-6777</td>
<td>Yes</td>
</tr>
<tr>
<td>Centre De services Guigues</td>
<td>159 Murray St. Ottawa</td>
<td>613-241-1266</td>
<td>Yes</td>
</tr>
<tr>
<td>Christine Mercer</td>
<td>1385 Bank St. Suite 410, Ottawa</td>
<td>613-260-8255</td>
<td>Yes</td>
</tr>
<tr>
<td>Feet Docs Dr. Greenburg</td>
<td>102-770 Broadview Ave. Ottawa</td>
<td>613-727-1888</td>
<td>Yes</td>
</tr>
<tr>
<td>The Glebe Centre Abbottsford House</td>
<td>950 Bank St. Ottawa,</td>
<td>613-238-2727</td>
<td>Yes</td>
</tr>
<tr>
<td>Hayles Foot and Ankle Clinic</td>
<td>344 Churchill Ave N Ottawa</td>
<td>613-792-3477</td>
<td>Yes</td>
</tr>
<tr>
<td>Hunt Club/Riverside CRC</td>
<td>3320 Paul Anka Dr. Ottawa</td>
<td>613-247-1600</td>
<td>Yes</td>
</tr>
<tr>
<td>Lori Barnes D CH</td>
<td>1385 Bank St. Unit 410, Ottawa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joanna Faloon B.Sc.D.P.M - Doctor of Podiatric Medicine</td>
<td>230 Lisgar St. Ottawa</td>
<td>613-235-5513</td>
<td>Yes</td>
</tr>
<tr>
<td>Nathalie de Maurivev D Ch</td>
<td>380 Hunt Club Rd. Ottawa</td>
<td>613-266-7889</td>
<td>Yes</td>
</tr>
<tr>
<td>O’Connor Medical Group</td>
<td>267 O’Connor St Unit 404, Ottawa</td>
<td>613-288-0055</td>
<td>Yes</td>
</tr>
<tr>
<td>Ottawa Foot Health Centre</td>
<td>1335 Carling Ave #570, Ottawa</td>
<td>613-724-3668</td>
<td>Yes</td>
</tr>
<tr>
<td>Paramed</td>
<td>1145 Hunt Club Rd. Ottawa</td>
<td>613-728-7080</td>
<td>Yes</td>
</tr>
<tr>
<td>Rehabilitation Centre</td>
<td>505 Smyth Rd. Ottawa</td>
<td>613-737-7350 x 75314</td>
<td>Yes</td>
</tr>
<tr>
<td>Revera Home Health</td>
<td>301 Laurier Ave. E. Ottawa</td>
<td>613-728-2277</td>
<td>Yes</td>
</tr>
<tr>
<td>The Good Companions Seniors’ centre</td>
<td>670 Albert Ottawa</td>
<td>613-236-0428</td>
<td>Yes</td>
</tr>
<tr>
<td>Total Foot Care, The Ottawa Hospital</td>
<td>20 Melrose Ave. Ottawa</td>
<td>613-798-5555</td>
<td>Yes</td>
</tr>
<tr>
<td>VHA Health and Home Support</td>
<td>250 City Centre Ave. #700, Ottawa</td>
<td>613-248-8420</td>
<td>Yes</td>
</tr>
<tr>
<td>Walking Mobility Clinics</td>
<td>1407 Bank St. #102, Ottawa</td>
<td>613-730-1015</td>
<td>Yes</td>
</tr>
<tr>
<td>We Care Health Service</td>
<td>2269 Riverside Dr. #137, Ottawa</td>
<td>613-782-2244</td>
<td>Yes</td>
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<tr>
<td>Community Chiropody Program</td>
<td>420 Cooper St. Ottawa</td>
<td></td>
<td>No</td>
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<tr>
<td>Community Chiropody Program</td>
<td>1365 Richmond Rd. Ottawa</td>
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## RENFREW COUNTY

<table>
<thead>
<tr>
<th>Foot Care Provider</th>
<th>Address</th>
<th>Telephone</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arnprior Chiropractic Health Centre</td>
<td>5 Charles St. Arnprior</td>
<td>613 623-9440</td>
<td>Yes</td>
</tr>
<tr>
<td>Bayshore Home Health</td>
<td>169 Lake St. Pembroke</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Whitewater Bromley Community Health Centre</td>
<td>20 Robertson Dr. RR 1 Beachburg</td>
<td>613-582-3685</td>
<td>No</td>
</tr>
<tr>
<td>Pembroke Civic Complex (Carefor Health &amp; Community Services)</td>
<td>425 Cecelia St. Pembroke</td>
<td>613-732-9993</td>
<td>Yes</td>
</tr>
<tr>
<td>Deep River &amp; District Hospital</td>
<td>117 Banting Dr. Deep River</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Pembroke Civic Complex (Carefor Health &amp; Community Services)</td>
<td>154 Civic Centre Rd. Pembawwa</td>
<td>613-687-7641</td>
<td>Yes</td>
</tr>
<tr>
<td>Schmitz Michael D CH</td>
<td>201 Deacon Pembroke</td>
<td>613-735-6742</td>
<td>Yes</td>
</tr>
<tr>
<td>Paramed</td>
<td>595 Pembroke St. E. Pembroke</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Pikwakanagan FHT</td>
<td>643 Mishomis Inamo Golden Lake</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Rainbow Valley Community Health Centre</td>
<td>49 Mill Street, Killaloe Station</td>
<td>613-757-0004</td>
<td>Yes</td>
</tr>
<tr>
<td>Wound Care Clinic: Renfrew Victoria Hospital</td>
<td>499 Raglan St. N. Renfrew</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Sally Prendergast</td>
<td>501 Mink Lake Rd. Eganville</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Barry's Bay Saint Francis Memorial Hospital</td>
<td>7 St Francis Memorial Drive Barry's Bay</td>
<td>613-757-3004 x 240</td>
<td>Yes</td>
</tr>
<tr>
<td>Community Chiropody Program</td>
<td>20 Robertson Dr. Whitewater Region</td>
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<td>No</td>
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## EASTERN COUNTIES

<table>
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<tr>
<th>Foot Care Provider</th>
<th>Address</th>
<th>Telephone</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denise Foot Care Service</td>
<td>3403 Marcil Rd. Bourget</td>
<td>613-302-3082</td>
<td>Yes</td>
</tr>
<tr>
<td>Hawkesbury General Foot Care and Chiropody Clinic</td>
<td>1111 Ghislain St. Hawkesbury</td>
<td>613-632-1111 x 402</td>
<td>No</td>
</tr>
<tr>
<td>Pharmacie Lise St-Denis Pharmacy</td>
<td>400 Spence Ave. Hawkesbury</td>
<td>613-632-8839</td>
<td>Yes</td>
</tr>
<tr>
<td>Source Unique</td>
<td>219 Main St. E. Hawkesbury</td>
<td>613-632-4185</td>
<td>Yes</td>
</tr>
<tr>
<td>Burnshome Home Health</td>
<td>112 Second St. W. Cornwall</td>
<td>613-938-1691</td>
<td>Yes</td>
</tr>
<tr>
<td>Burns Ortho Medical</td>
<td>30 13th St, Cornwall</td>
<td>613-932-3139</td>
<td>Yes</td>
</tr>
<tr>
<td>Centre de Sante Communaucatale de L'Estrle</td>
<td>738 Notre Dame St. Embrun</td>
<td>613 487 1802</td>
<td>No</td>
</tr>
<tr>
<td>CareFor (Cornwall)</td>
<td>205 Amelia St. Cornwall</td>
<td>613-932-3451</td>
<td>Yes</td>
</tr>
<tr>
<td>Foot and Ankle Clinic</td>
<td>1077 Pitt St. Cornwall</td>
<td>613-936-8461</td>
<td>Yes</td>
</tr>
<tr>
<td>Easton Gary R D Ch-Foot Specialist</td>
<td>16 Third E. Cornwall</td>
<td>613--937-2888</td>
<td>Yes</td>
</tr>
<tr>
<td>Macintosh J W Senior's Support Centre</td>
<td>4324 Villa Dr. Williamsburg</td>
<td>613-535-2924</td>
<td>Yes</td>
</tr>
<tr>
<td>Maxville Manor Centre and Outreach</td>
<td>North Glengarry</td>
<td>613- 527-2170</td>
<td>Yes</td>
</tr>
<tr>
<td>North River Health Clinic</td>
<td>494 Fred St. Winchester</td>
<td>613-774-0915</td>
<td>Yes</td>
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### NORTH LANARK/NORTH GRENVILLE

<table>
<thead>
<tr>
<th>Foot Care Provider</th>
<th>Address</th>
<th>Telephone</th>
<th>Fee</th>
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<tbody>
<tr>
<td>Back on Track Physiotherapy Centre</td>
<td>515 McNeely Ave., Carleton Place</td>
<td>613-253-5215</td>
<td>Yes</td>
</tr>
<tr>
<td>In Step Foot Clinic</td>
<td>2670 Highway 43, Kemptville</td>
<td>613-258-6862</td>
<td>Yes</td>
</tr>
<tr>
<td>Mills Community Support Corporation</td>
<td>67 Industrial Dr, Almonte</td>
<td>613-256-1031</td>
<td>Yes</td>
</tr>
<tr>
<td>North Lanark County Community Health Centre</td>
<td>207 Robertson, Lanark</td>
<td>613-259-2182</td>
<td>No</td>
</tr>
<tr>
<td>Carleton Place &amp; District Memorial Hospital</td>
<td>211 Lake Ave E, Carleton Place</td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>
HEART FAILURE

Heart failure poses a significant burden for patients. Hospital re-admissions can be as high as 30% within 6 months and are associated with higher patient mortality. Regular patient follow-up, fluid/sodium management education, and monitoring of medication regimes can reduce re-admission rates up to 25% and improve quality of life.


DIAGNOSIS OF HEART FAILURE

**Screen high risk populations:**
- Known coronary artery disease or previous MI
- DM (12% pts with DM have HF; 30% pts with HF have DM)
- Chronic Kidney Disease
- Alcoholism
- Obesity (each 1-unit increase in BMI increases risk of HF by 5% (7% in women))
- Personal or family history of cardiomyopathy
- Recently discharged from hospital with HF or other cardiac reason for admission

**Signs and symptoms of Heart Failure include:**
- Exertional dyspnea and/or fatigue
- Dependent edema
- Orthopnea/PND
- Crackles
- New or increased murmur
- Elevated JVP

**If Heart Failure is suspected, consider the following diagnostic tests:**
- ECG
- Chest x-ray
- CBC, Creatinine, Electrolytes
- BNP if available
- Echocardiogram (include ejection fraction)

It is unlikely to be HF if **all** of the following criteria are met:
- Normal echocardiogram
- Normal JVP
- No fluid retention: no peripheral edema, no abdominal bloating
- No crackles

It is probably HF if **any** of the following criteria are met:
- Any history of cardiomyopathy
- Orthopnea, PND
- Increased JVP
- Positive echo:
  - Abnormal EF or,
  - Grade II to IV diastolic dysfunction, or,
  - Moderate to severe valve abnormality
- Positive chest x-ray:
  - Evidence of pulmonary edema or
  - Enlarged heart

Diagnosis of HF needs further clarification if:
- Progressive, unexplained symptoms
- Patient has risk factors for HF (see box above) but does not meet other diagnostic criteria
- Credible alternative diagnoses exist
- Echocardiogram shows:
  - Grade I or mild diastolic dysfunction
  - Wall motion abnormality
  - Any mild valve abnormality.

Identify and manage risk factors
- Follow symptomatology at appropriate intervals
- Patient education: monitor for symptoms, dietary sodium precautions

**BNP = B-type natriuretic peptides**
**CBC = complete blood count**
**DM = Diabetes Mellitus**
**ECG = electrocardiogram**
**EF = ejection fraction**
**HF = heart failure**
**JVP = jugular venous pressure**
**MI = myocardial infarction**
**PND = paroxysmal nocturnal dyspnea**
**TSH = thyroid stimulating hormone**
HEART FAILURE MANAGEMENT

ALL PATIENTS WITH HEART FAILURE REQUIRE SELF-MANAGEMENT EDUCATION WHICH INCLUDES THE FOLLOWING:

<table>
<thead>
<tr>
<th>Warning Signs and Symptoms</th>
<th>Lifestyle</th>
<th>Treatment Regimen</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Dyspnea; when flat, during sleep, with less exertion</td>
<td>• Eliminate added salt and sodium foods</td>
<td>• May require medications such as:</td>
</tr>
<tr>
<td>• Fatigue with less exertion</td>
<td>• Avoid encouraging oral fluids</td>
<td>1. ACE-I/ARB</td>
</tr>
<tr>
<td>• Symptoms at rest</td>
<td>• Weight daily if fluid retention</td>
<td>2. Beta blocker</td>
</tr>
<tr>
<td>• Sudden weight gain</td>
<td>• Engage in regular tolerated activity</td>
<td>3. Spironolactone, which</td>
</tr>
<tr>
<td>• Lightheaded/faint</td>
<td>• Quit smoking</td>
<td>• Improve survival</td>
</tr>
<tr>
<td>• Prolonged palpitations</td>
<td>• Manage cardiovascular risk factors</td>
<td>• May be prescribed in combinations</td>
</tr>
<tr>
<td></td>
<td>- Hypertension</td>
<td>• May require dosage adjustments</td>
</tr>
<tr>
<td></td>
<td>- Lipids</td>
<td>• Will likely be required over the long term</td>
</tr>
<tr>
<td></td>
<td>- Diabetes</td>
<td>• May produce common side effects</td>
</tr>
</tbody>
</table>

Tailored exercise programs may lead to improvements in quality of life; even in pts with end-stage HF. Consider referral to cardiac rehabilitation in all clinically stable patients with NYHA I – III (See Community Resource section following).

Special Considerations

Sleep Apnea and HF:
• The prevalence of sleep apnea in HF patients can be as high as 50%
• HF patients with sleep apnea do not complain of daytime sleepiness
• Suspect sleep apnea in HF patients with paroxysmal atrial fibrillation, obesity, drug-resistant hypertension, and otherwise unexplained pulmonary hypertension.
• Refer patients with suspected sleep apnea to sleep lab for definitive diagnosis and management

Renal Failure and HF
• Refer patients with combined heart failure and renal dysfunction

Palliative Care and HF:
• Initiate regular discussion with patients and family regarding advanced care planning
• Refer patients with persistent, advanced symptoms despite optimal therapy to ensure HF management is optimized
• Maintaining patients on HF meds may help with symptom management. These should not be discontinued when palliative care is being considered unless not symptomatically tolerated as can occur in end-stage disease.
### HEART FAILURE MANAGEMENT

**If Ejection Fraction is:**

- **≤ 40%**
  - ACE Inhibitor (ARB if intolerant) + Beta-blocker
  - Titrate to target doses (p X)
  - NYHA II or less and clinically stable
    - If EF < 35%:
      - **Consider referral** to cardiologist or HF clinic - may be ICD/ CRT candidate
      - If recently d/c’d from hospital or ER, consider spironolactone

- **> 40%**
  - Treat underlying cause:
    - Hypertension (pX)
    - Atrial fibrillation
    - Ischemia
  - Reinforce lifestyle modification
  - Consider ACE Inhibitor (ARB if intolerant) +/- beta blocker

**NYHA III or persistent symptoms:**

- **Refer to HF Clinic or Cardiologist**
- Consider:
  - Loop Diuretics
  - Digoxin and/or
  - Spironolactone and/or
  - ARB

**Frequency of follow-up:**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Follow-up within:</th>
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</thead>
<tbody>
<tr>
<td>Acute change in HF symptoms</td>
<td>24-48 hrs</td>
</tr>
<tr>
<td>After HF related ER visit</td>
<td>2 weeks</td>
</tr>
<tr>
<td>After addition of HF medication or increase in dose:</td>
<td></td>
</tr>
<tr>
<td>- If unstable</td>
<td>7 days</td>
</tr>
<tr>
<td>- If stable or asymptomatic</td>
<td>2-4 weeks</td>
</tr>
<tr>
<td>Stable on optimized therapy</td>
<td>3 months</td>
</tr>
</tbody>
</table>

**Referral Criteria**

- New onset HF
- Recent HF hospitalization
- HF associated with:
  - Ischemia
  - Syncope
  - eGFR < 60
  - Multiple co-morbidities
  - Poorly controlled hypertension
  - Moderate to severe valve disease
  - Unknown aetiology
  - Family history of cardiomyopathy
  - Intolerance to therapies
  - Poor compliance with treatment regimen

**With each visit, assess:**

- HF symptoms/ new symptoms
- BP (sitting/ standing); heart rate
- Medication profile
- Weight; JVP, Ankle edema

**Periodically, based on above, assess:**

- ECG, CXR, echo
HEART FAILURE MEDICATION TITRATION**

<table>
<thead>
<tr>
<th>Medication</th>
<th>Start Dose</th>
<th>Target Dose</th>
<th>Precautions</th>
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<tbody>
<tr>
<td>ACE Inhibitor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Captopril</td>
<td>6.25 mg to 12.5 mg tid</td>
<td>25 mg to 50 mg tid</td>
<td>• Initiate ACE inhibitor or ARB if creatinine &lt;180 and stable (≤25% change within the last 3 – 6 months) and K &lt;5.2.</td>
</tr>
<tr>
<td>Enalapril</td>
<td>1.25 mg to 2.5 mg bid</td>
<td>10 mg bid</td>
<td></td>
</tr>
<tr>
<td>Ramipril</td>
<td>1.25 mg to 2.5 mg bid</td>
<td>5 mg bid</td>
<td></td>
</tr>
<tr>
<td>Lisinopril</td>
<td>2.5 mg to 5 mg od</td>
<td>20 mg to 35 mg od</td>
<td></td>
</tr>
<tr>
<td>ARB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Candesartan</td>
<td>4 mg od</td>
<td>32 mg od</td>
<td></td>
</tr>
<tr>
<td>Valsartan</td>
<td>40 mg bid</td>
<td>160 mg bid</td>
<td></td>
</tr>
<tr>
<td>Beta blocker</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carvedilol</td>
<td>3.125 mg bid</td>
<td>25 mg bid</td>
<td>• Titrate until resting heart rate &lt;65 beats per minute or the development of symptoms related to bradycardia.</td>
</tr>
<tr>
<td>Bisoprolol</td>
<td>1.25 mg od</td>
<td>10 mg od</td>
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<tr>
<td>Metoprolol</td>
<td>12.5 mg to 25 mg bid</td>
<td>200 mg bid</td>
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</tr>
<tr>
<td>Other</td>
<td></td>
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</tr>
<tr>
<td>Spironolactone</td>
<td>12.5 mg od</td>
<td>25 mg od</td>
<td>• Not recommended in patients already prescribed combination ACE inhibitor and ARB therapy.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Same monitoring of electrolytes and creatinine as in the ACE inhibitor/ARB section</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>• Avoid combination with other K sparing diuretics.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Discontinue use if K &gt;5.2.</td>
</tr>
</tbody>
</table>

** i.e. Adapted from CCS consensus conference recommendations on heart failure 2006: Diagnosis and management. 35
COMMUNITY RESOURCES - HEART FAILURE

Clinic/Program: University of Ottawa Heart Institute Heart Function/ Transplantation Clinic
Contact: Tara Hetherington
Tel: 613-761-5363 Fax: 761-4375
Director: Dr. H. Haddad

Description: Clinic provides immediate and long term, multi-disciplinary care for patients with all degrees of heart failure. Within the clinic, patients have access to comprehensive diagnostic evaluations.

Appropriate for: Individuals with all degrees of heart failure

Hours: Mon to Fri: 8:00 a.m. - 4:00 p.m.

Language: English, French

Cost: N/A

Referral: Fax referral form to: 613-761-4375. Include relevant patient history and most recent test results. Clinic will notify patient of appointment date and time.

Clinic/Program: University of Ottawa Heart Institute Cardiac TeleCare
Medical Lead: Dr. Lisa Mielniczuk
Contact: Christine Struthers, APN Cardiac Telehealth
Tel: 613-761-4134 Fax: 613-761-4158

Description: Home telehealth technologies such as telehome monitoring and automated calling are used to provide access to specialized services and follow-up to chronic cardiac patients living at home. Data such as weight & vital signs as well as responses to automated questions are transmitted to a UOHI central database which is monitored by an advanced practice nurse.

Appropriate for: Individuals with heart failure, hypertension, ACS

Hours: Mon to Fri: 8:00 a.m. - 4:00 p.m.

Language: Home monitor may be programmed to 8 languages: French, English, French Canadian, Hindi, Italian, Spanish, Deutch, Portuguese. Automated calls are made in English or French.

Cost: N/A

Referral: Allied health and/or physician referral accepted.
Clinic/Program: Queensway Carleton Hospital Heart Failure Clinic
3045 Baseline Road Ottawa, ON K2H 8P4
Tel: 613-721-2000 ext. 2961 Fax: 613-721-4763
Website: http://www.qch.on.ca
Physicians: Dr. T. McKibbin, Dr. R. Grewal, Dr. G. Tsimiklis
Contact: Joanna Steele

Description: The clinic is both an information resource and patient management provider. For Heart Failure information sessions, contact Joanna Steele. For medical management, referral is required.

Appropriate for: Individuals with heart failure

Hours: Tues & Wed: 12:30 p.m. - 4:00 p.m., Thurs: 8:30 a.m. - 12:00 p.m.

Language: English, French

Cost: N/A

Referral: Referral form available online at http://www.qch.on.ca click on congestive heart failure clinic, then healthcare professionals to download form.

Clinic/Program: Cornwall Community Hospital Heart Failure Clinic
Medical Lead: Dr. P. DeYoung
Contact: Marion Watt, Nurse Practitioner
Tel: 613-938-4240 ext. 4190 Fax: 613-938-5375

Description: Provides comprehensive teaching and follow up to patients with heart failure. Teaching focus includes medication, self-monitoring of weight, blood pressure, pulse, edema, and lifestyle changes (diet, smoking, physical activity). Works closely with family practitioners and specialists in managing patients who are newly diagnosed or recently hospitalized with heart failure. Follows patients every 1 to 2 months until stable and knowledgeable. Remains available for follow up phone call advice and review when necessary.

Appropriate for: Patients with heart failure

Hours: Tues to Fri: 8:00 a.m. to 6:00 p.m.

Language: English, French

Cost: N/A

Referral: Physician referral required.
Fax referral form and results of any recent tests to 613-938-5375.
Clinic/Program: **Hôpital Montfort Cardiac Rehabilitation Programs**  
713 Montreal Road, Ottawa, ON K1K 0T2  
Tel: 613-746-4621 ext. 3130 or 613-842-0541 Fax: 613-842-9473

Description: **(1) On-Site Supervised Program**  
- 1- to 4-month program  
- Supervised on-site, twice-weekly exercise sessions  
- Medical and cardiovascular risk assessment  
- Education sessions  
- Referral to services such as nutrition and psychological as needed

**(2) Case-Managed Home Program**  
Provides flexibility for those unable to participate in hospital-based program  
- 4-month program  
- Tailored program focused on your personal heart health goals  
- Medical and cardiovascular risk assessment  
- 3-4 appointments at Montfort Hospital, remainder by phone or in person as desired  
- Individual home exercise program - **no supervised exercise sessions**

Appropriate for: Patients with myocardial infarction, acute coronary syndrome, recent PCI and/or bypass surgery

Hours: Vary

Language: English, French

Cost: N/A

Referral: Physician referral required.

To refer: Complete referral form; attach most recent tests; fax to clinic; and advise patient that hospital will contact directly with date and time of first appointment.

---

Clinic/Program: **Cornwall Community Hospital Respiratory & Heart Failure Rehabilitation Program**  
840 McConnell Ave., Cornwall, ON K2H 5S5  
Contact: Sylvie Belanger  
Tel: 613-938-4240 ext. 3104

Description: A 3-month program; patients attend two times per week. Includes education, personalized advice, disease management training, endurance training.

Appropriate for: Anyone with any type of respiratory disease or heart failure

Hours: Variable

Language: English, French

Cost: N/A

Referral: Physician or nurse practitioner referral
Clinic/Program: University of Ottawa Heart Institute (UOHI)
Cardiac Rehabilitation Programs
40 Ruskin Street, Ottawa, ON K1Y 4W7
Tel: 613-761-4572 Fax: 613-761-5336

Description: All of our program options include: coronary risk factor assessment, access to follow-up evaluation after three and twelve months, access to nutrition workshops, referral to services such as: nutritional counseling, stress management, smoking cessation, vocational counseling, psychological counseling, social work counseling.

(1) On-Site Supervised Program
• 2-3-month program
• Supervised on-site, twice-weekly exercise sessions (1 hour/ session)
• Medical assessment by cardiac rehabilitation physician
• Classes are supervised by a physiotherapist and a nurse.
• Different class intensities based on your needs.

(2) Case-Managed Home Program
Provides flexibility for those unable to participate in hospital-based program
• 3-month program
• Tailored program focused on your personal heart health goals
• Weekly phone call that lasts approximately 30 minutes each
• Individual home exercise program - no supervised exercise sessions

(3) Brief Program
• Only for those patients that are able to exercise independently with no supervised exercise sessions and no on going follow-up
• Exercise evaluation and tailored home exercise program

Appropriate for: Patients with myocardial infarction, acute coronary syndrome, recent PCI and/ or bypass surgery.

Hours: Vary

Language: English, French

Cost: N/A

Referral: Physician referral required.
Please contact phone number 761-4572 and a referral form will be sent by fax.
Clinic/Program: **Pembroke Regional Hospital Cardiac Rehabilitation Program**  
705 Mackay Street, Pembroke, ON  
Tel: 613-732-3675 ext. 8091 Fax: 613-732-6350

Description:  
- 3-6 month program, modeled after UOHI on-site program  
- Supervised on-site, twice-weekly exercise sessions  
- Education sessions  
- Medical assessment  
- Referral to a dietician or social worker as needed  
- Case-managed home program also available  
- Home program also available

Appropriate for: Patients with myocardial infarction, acute coronary syndrome, recent PCI and/ or bypass surgery.

Hours: Vary

Language: English

Cost: N/A

Referral: Physician or nursing referral required. Complete referral form; attach most recent tests; fax to clinic; and advise patient that hospital will contact directly with intake appointment time and send out an information package to the patient.

---

Clinic/Program: **Hawkesbury & District General Hospital Supervised Program**  
1111 Ghislain Street, Hawkesbury, ON  
Tel: 613-632-1111 ext. 177  
Contact: Natalie Aupin

Description:  
- 12-week walking program  
- Supervised on-site, twice-weekly exercise sessions  
- Education sessions (4 Fridays in a row)  
- Bilingual staff  
- One to one prevention clinic

Appropriate for: Patients with myocardial infarction, acute coronary syndrome, recent PCI and/ or bypass surgery.

Hours: Vary

Language: English, French

Cost: N/A

Referral: Contact clinic for information or physician referral
Clinic/Program: **Brockville Cardiovascular Program: Cardiac Rehabilitation and Vascular Risk Management**
75 Charles Street, Brockville, Ontario, K6V 1S8
Phone: 613-345-5645 ext. 1414 Fax: 613-345-8348
Contact: Margriet Debruyn, ext. 1166

Description: This program provides individualized exercise, education (diabetes, nutritional), and counselling designed to help clients reduce their risk of facing future cardiac problems.

Appropriate for: Cardiac patients requiring secondary prevention and cardiac rehabilitation

Hours:
- Exercise days are Wed & Fri: 9:00 a.m. - 12:00 p.m.
- Assessment day is Fri: 1:00 p.m. - 3:00 p.m.

Language: English

Cost: N/A

Referral: Physician referral is required.
Please fax referral along with pre-treatment and most recent lipid profile, diabetic profile, reports on angiogram, angioplasty, surgery, or other cardiac procedures. Once referral is received, patients are contacted and arrangements to attend intake are made.

NOTES
## APPENDIX A: FRAMINGHAM RISK SCORE FOR TOTAL CVD

The Framingham Risk Score for Total CVD assesses the 10-year risk of developing overall CVD. These sex-specific tables require inputs of blood pressure, cholesterol levels, diabetes, and smoking. Thus, not only is the overall risk quantified, but the source of the risk can be identified for treatment.

### CVD POINTS FOR WOMEN


<table>
<thead>
<tr>
<th>POINTS</th>
<th>Age (years)</th>
<th>HDL-C (mmol/L)</th>
<th>Total Cholesterol (mmol/L)</th>
<th>SBP Not Treated (mmHg)</th>
<th>SBP Treated (mmHg)</th>
<th>Smoker</th>
<th>Diabetic</th>
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**CVD RISK FOR WOMEN**

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<td>&gt; 30%</td>
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Risk Modifiers

Family history of cardiovascular disease: multiply calculated 10-year risk (%) by 2.0
### CVD POINTS FOR MEN (D’Agostino R et al. Circulation 2008;117:743-753)

<table>
<thead>
<tr>
<th>POINTS</th>
<th>Age (years)</th>
<th>HDL-C (mmol/L)</th>
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### CVD RISK FOR MEN

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<td>18+</td>
<td>&gt; 30%</td>
</tr>
</tbody>
</table>

Risk Modifiers

Family history of cardiovascular disease: multiply calculated 10-year risk (%) by 2.0
APPENDIX B: INSTRUCTIONS FOR WAISTLINE MEASUREMENT

Source: Heart and Stroke Foundation of Canada

1. Patient standing upright.
2. Have patient inhale, fully exhale, breathe normally.
3. Place tape around waist:
   - Men: should be measured at the navel;
   - Women: should be measured midway between the bottom of the ribs and the top of the hip bones.
4. Hold tape firmly but do not press in.
5. Make sure measuring tape is parallel to the floor to avoid misreading.
6. Take reading.

Patients are at significantly increased risk of health problems if their waist is:
- More than 35 inches (88 cm) for women;
- More than 40 inches (102 cm) for men.

APPENDIX C: TIPS FOR MEDICATION ADHERENCE

Source: Heart and Stroke Foundation of Canada

If you have trouble remembering to take pills, establish a routine:
- Take your medications at the same time every day.
- Consider setting a separate alarm clock to remind you that it is time to take your medication.
- Try putting your medications in pill containers marked with the dates and times.
  - Check with your pharmacist first, as some medications need to be stored in the original containers.
- Use visual reminders, such as keeping your pills on the kitchen counter, or putting a sticker on your bathroom mirror.
- Mark your calendar with the date your prescription runs out, and fill your prescription before that date. In addition, count your tablets on the date the prescription should run out. If you have tablets left, you have forgotten to take some of the pills and need to try different methods to help you remember when to take them.
- Keep an up-to-date record of all your medications with you at all times. This is very important if you have a medical emergency, see a new doctor or nurse, or travel. When you travel, take along extra medications in case of delays, and be sure to keep your medications in your carry-on baggage.
APPENDIX D: THE HEALTHY PHYSICAL ACTIVITY PARTICIPATION QUESTIONNAIRE


A. Please answer the following questions:

Frequency
Over a typical 7-day period (1 week), how many times do you engage in physical activity that is sufficiently prolonged and intense to cause sweating and a rapid heart beat?

____ At least three times  ____ Normally once or twice  ____ Rarely or never

Intensity
When you engage in physical activity, do you have the impression that you:

____ Make an intense effort?  ____ Make a moderate effort?  ____ Make a light effort?

Perceived fitness
In a general fashion, would you say that your current level of physical fitness is:

____ Very good  ____ Good  ____ Average  ____ Poor  ____ Very poor

B. Circle your score below for each answer and total your score:

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<thead>
<tr>
<th>Item</th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
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<th>Female</th>
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<td>Rarely or never</td>
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<td>At least 3 times</td>
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<td>3</td>
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</table>

Total score: ___

C. Determine the health benefits of your physical activity based on your total score:

Total score health benefit:
9–11  Excellent
6–8  Very good
4–5  Good
1–3  Fair
0  Needs improvement
## APPENDIX E: BODY MASS INDEX (BMI)

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<th>Height (cm)</th>
<th>Normal</th>
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REFERENCES
