



THE CHAMPLAIN
CARDIOVASCULAR DISEASE
PREVENTION NETWORK

THE CHAMPLAIN PRIMARY CARE
CARDIOVASCULAR DISEASE
PREVENTION & MANAGEMENT GUIDELINE

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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.

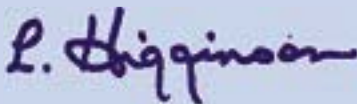
Cardiovascular disease (CVD) continues to be the leading cause of death in Ottawa and our surrounding region (the Champlain District). The burden of CVD is expected to double as the generation of baby boomers age. In addition to the educational and policy interventions required to manage this epidemic, 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



I wish to congratulate the Champlain Cardiovascular Disease Prevention Network for producing these needed guidelines for the primary care sector. The work fits in with the priorities of the Champlain

Local Health Integration Network (LHIN), as chronic disease prevention & management is one of our six strategic directions. This document is a good example of how a number of partners can work together to build healthier communities. Encouraging common practices that achieve the best results will certainly improve quality of care, and the compendium of services will increase access to preventive and treatment services for clients across a wide geographical area. Importantly, cardiovascular diseases share risk factors with other illnesses such as diabetes, so this document has the potential to make a profound impact on every family living in the Champlain region.



Dr. Robert Cushman
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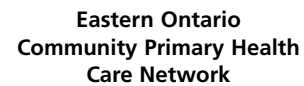


THE CHAMPLAIN
CARDIOVASCULAR DISEASE
PREVENTION NETWORK

THE CHAMPLAIN CVD 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:



The IDOCC 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
Electronic versions of the Guideline are available at www.idocc.ca



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SUMMARY OF RECOMMENDATIONS

SUMMARY TABLE 1: SCREENING

Population→ Targets ↓	Adult <40 yrs with Risk Factors Adult Male ≥40 yrs Adult Female ≥50 yrs and/ or post-menopausal	Adult at High Risk* for CVD OR with CAD or PVD OR with TIA/ Stroke	Adult with ↓ eGFR or CKD OR with Diabetes Mellitus (DM)
Smoking	Identify and Advise all smokers to quit at each visit.		
Physical Activity Status	Annually		
BMI & Waist	Annually or as indicated	Every 3 to 6 months or as indicated	
Framingham Risk Score (FRS) for Total CVD**	Every 1 to 3 years	Classified as high risk; no FRS required	
Fasting (9-12h) Lipid Profile	Every 1 to 3 years + FRS Screen at any age in adults with major risk factors	Annually	
Blood Pressure (BP)***	At all appropriate clinic visits Proper BP measurement annually in persons with borderline hypertension	Proper BP measurement every 3 to 6 months or as indicated	
Fasting Blood Glucose (FBG)	Every 3 years. Earlier and more frequently in individuals with additional risk factors for DM	Every 3 to 6 months or as indicated	
HbA1c	Not indicated unless FBG elevated	In adults with DM every 3 to 6 months; not indicated in other populations unless FBG elevated	
eGFR/ ACR	Screen in patients with hypertension, heart failure, First Nations people, unexplained anemia, family history of end-stage renal disease, autoimmune disease, and edema	Annually or as indicated	
Edinburgh Claudication Questionnaire**** & Physical Exam	Annually		

*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 57)

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



SUMMARY TABLE 2: RECOMMENDED TARGETS

Population→ Targets ↓	Adult <40 yrs with Risk Factors Adult Male ≥40 yrs Adult Female ≥50 yrs and/ or post-menopausal	Adult at High Risk* for CVD OR with CAD or PVD OR with TIA/ Stroke	Adult with ↓ eGFR or CKD OR with Diabetes Mellitus (DM)
Smoking	Smoke-free		
Physical Activity Status	30 to 60 minutes moderate activity 4 to 7 days per week		
BMI & Waist	BMI: 18.5 to 24.9 kg/m ² Waist: Men ≤102 cm (40"); Women ≤88 cm (35") (see page 10 for waist circumference cut-offs by ethnicity) For patients with dyslipidemia, see cholesterol guidelines (page 21)		
Fasting (9-12h) Lipid Profile	If low risk treat when: LDL-C ≥5 mmol/L or TC/HDL-C ≥6 Target: LDL-C <2 mmol/L or ↓ LDL-C by 50% If moderate risk treat when: LDL-C ≥3.5 mmol/L or TC/HDL-C ≥5 or hsCRP >2.0 mg/L Target: LDL-C <2 mmol/L or ↓ LDL-C by 50%	LDL-C <2 mmol/L or lower by 50% TC/HDL-C <4	
Blood Pressure (BP) (mmHg)	Below 140/90	Below 140/90	Below 130/80
Fasting Blood Glucose (FBG) (mmol/L)	Classify as normal if FBG <5.6	< 6	<i>If diabetic:</i> To achieve HbA1c target aim for BG = 4 – 7 before meals BG = 5 – 10 after meals (5 – 8 if not meeting HbA1c target)
HbA1c	As indicated	If FBG elevated, <7%	<i>If diabetic:</i> <7% (<6.5% if possible without hypoglycemia)
eGFR/ ACR		If proteinuria, ACEI or ARB to maximum tolerated dose to at least target ACR <40. Modify CV risk factors to target ACR <40. If still ACR >60, refer to nephrology.	

*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.

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 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

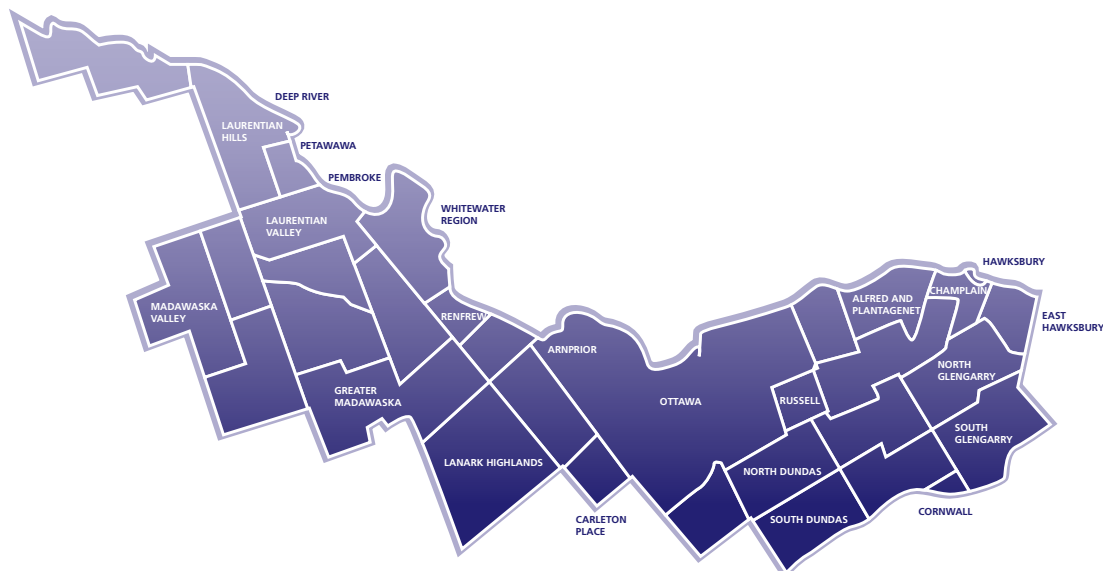




TABLE 1: CVD MORTALITY AND CVD RISK FACTOR PREVALENCE (%) IN CANADA, ONTARIO, THE CHAMPLAIN DISTRICT, AND HEALTH REGIONS (population aged 12 years and older)

Region	CVD Mortality Rate (per 100,000 persons)	Hypertension	Diabetes Mellitus	Over-weight (18+)	Obesity (18+)	Smoking (Daily)	Physical Inactivity	<5 servings fruits & veg/day
Canada	200.7	14.9	4.9	33.4	15.5	19.0	46.7	55.3
Ontario	204.9	15.2	4.8	33.4	15.1	15.4	45.8	53.4
Champlain	206.7	14.3	5.1	33.7	14.0	15.9	42.1	53.3
Eastern Counties	247.6	15.7	7.0	38.6	18.7	20.8	45.5	58.1
Renfrew County	257.0	18.3	6.3	32.4	20.2	22.4	44.2	51.9
Leeds, Grenville & Lanark	225.0	16.5	6.0	37.0	15.3	23.0	40.8	52.6
City of Ottawa	186.5	13.5	4.6	32.2	12.3	12.5	41.4	52.2

Source: Statistics Canada's health indicators data and Statistics Canada, Canadian Community Health Survey (CCHS 3.1), 2005.⁵

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, and Diabetes Mellitus (DM, or Diabetes) that are tailored to primary care practitioners working in the Champlain District.

THE GUIDELINE DEVELOPMENT PROCESS

Evidence Monitoring Committees were established for major CVD risk factors and for the management of patients with Coronary Artery Disease (CAD), Peripheral Vascular Disease (PVD), Stroke/ TIA and Diabetes. A total of nine Evidence Monitoring Committees, each responsible for reviewing the latest evidence and practice guidelines for their respective risk factor or disease management area, were struck to assist with the guideline development process. Each committee was 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 usual practices in the Champlain District. Recommendations were then summarized and placed into algorithm format. Knowledge translation tools appropriate to primary care and conforming to practice recommendations were also approved by the Evidence Monitoring Committees. The draft Champlain Guideline has been reviewed by primary care practitioners throughout the Champlain LHIN and modified based on feedback received. The guideline will 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 years⁶
- A history of premature CVD in a first-degree family member (< 55 years male and < 65 years female)⁶

MODIFIABLE:⁷

- 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:^{7,9}

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

PRESENCE OF ATHEROSCLEROTIC VASCULAR DISEASE:⁷

- 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.⁸

- 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.

Population→ Targets ↓	Adult <40 yrs with Risk Factors Adult Male ≥40 yrs Adult Female ≥50 yrs and/ or post-menopausal	Adult at High Risk* for CVD OR with CAD or PVD OR with TIA/ Stroke	Adult with ↓ eGFR or CKD OR with Diabetes Mellitus (DM)
Smoking	Identify and Advise all smokers to quit at each visit.		
Physical Activity Status	Annually		
BMI & Waist	Annually or as indicated	Every 3 to 6 months or as indicated	
Framingham Risk Score (FRS) for Total CVD**	Every 1 to 3 years	Classified a high risk; no FRS required	
Fasting (9-12h) Lipid Profile	Every 1 to 3 years + FRS Screen at any age in adults with major risk factors	Annually	
Blood Pressure (BP)***	At all appropriate clinic visits Proper BP measurement annually in persons with with borderline hypertension	Proper BP measurement every 3 to 6 months or as indicated	
Fasting Blood Glucose (FBG)	Every 3 years. Earlier and more frequently in individuals with additional risk factors for DM	Every 3 to 6 months or as indicated	
HbA1c	Not indicated unless FBG elevated	In adults with DM every 3 to 6 months; not indicated in other populations unless FBG elevated	
eGFR/ACR	Screen in patients with hypertension, heart failure, First Nations people, unexplained anemia, family history of end-stage renal disease, autoimmune disease, and edema	Annually or as indicated	
Edinburgh Claudication Questionnaire**** & Physical Exam	Annually		

*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 13)

**** Edinburgh Claudication Questionnaire (see page 57)

ACR = Albumin to Creatinine Ratio

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DM = Diabetes Mellitus

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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.³⁷ 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/m^2 (overweight) or greater than 30 kg/m^2 (obese);³⁷
- Autoimmune chronic inflammatory conditions such as rheumatoid arthritis, SLE, and psoriasis;³⁷
- Patients with chronic HIV infection;³⁷
- 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.⁹

CRITERIA USED TO DEFINE METABOLIC SYNDROME (three or more of the following⁹):

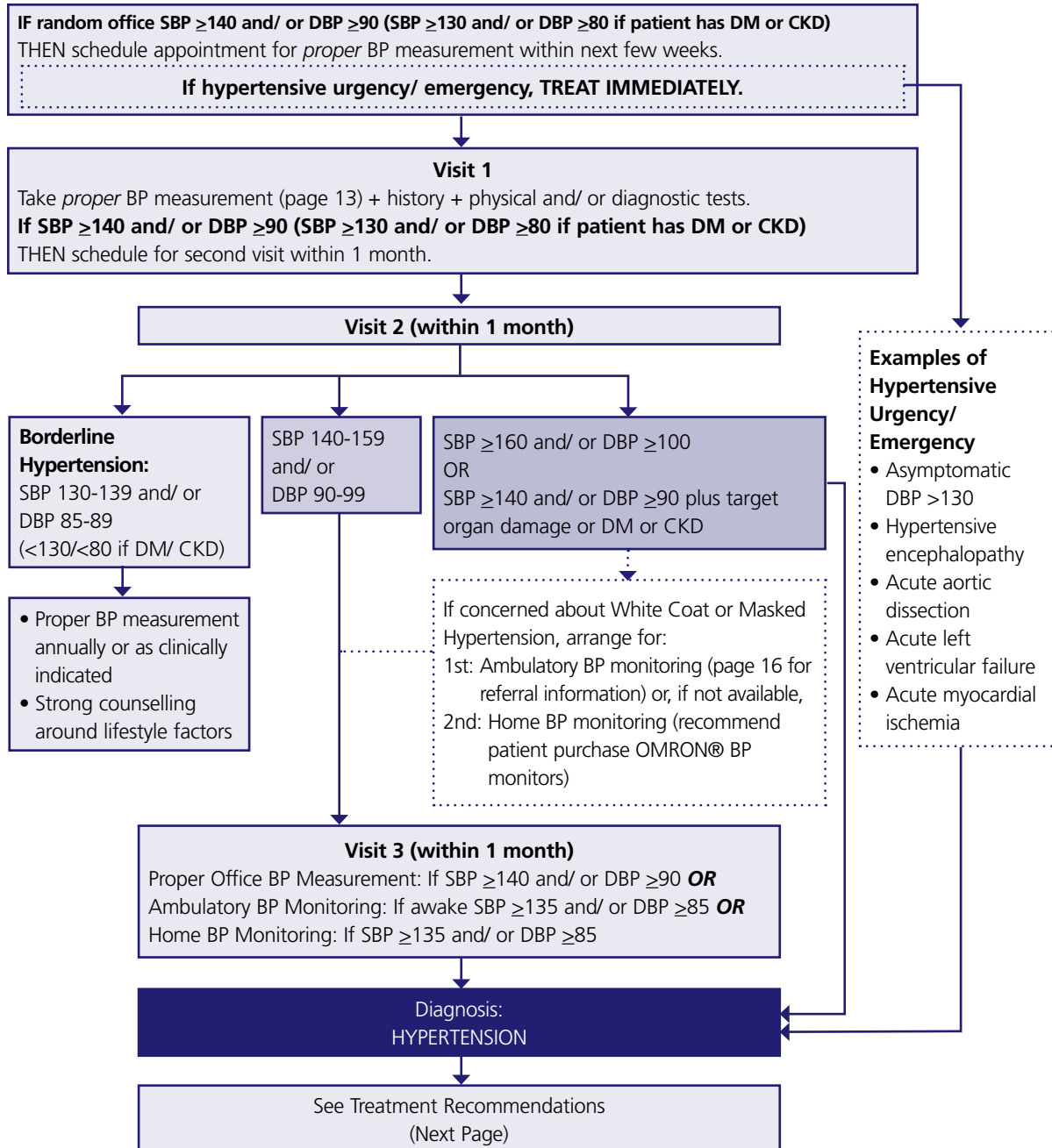
Risk Factor	Defining Level
Abdominal obesity Men Women	Waist circumference >102 cm (40") >88 cm (35") See page 10 for ethnic specific values
Triglycerides	≥ 1.7 mmol/L
High-density lipoprotein cholesterol (HDL-C) Men Women	<1.0 mmol/L <1.3 mmol/L
Blood pressure	$>130/85$ mmHg
Fasting glucose	5.7 – 7.0 mmol/L



HYPERTENSION

DIAGNOSIS OF HYPERTENSION

Source: Adapted for clinical practice from the Canadian Hypertension Education Program (CHEP). Recommendations for the Management of Hypertension 2006, 2009, and 2010.^{7,15, 36}



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

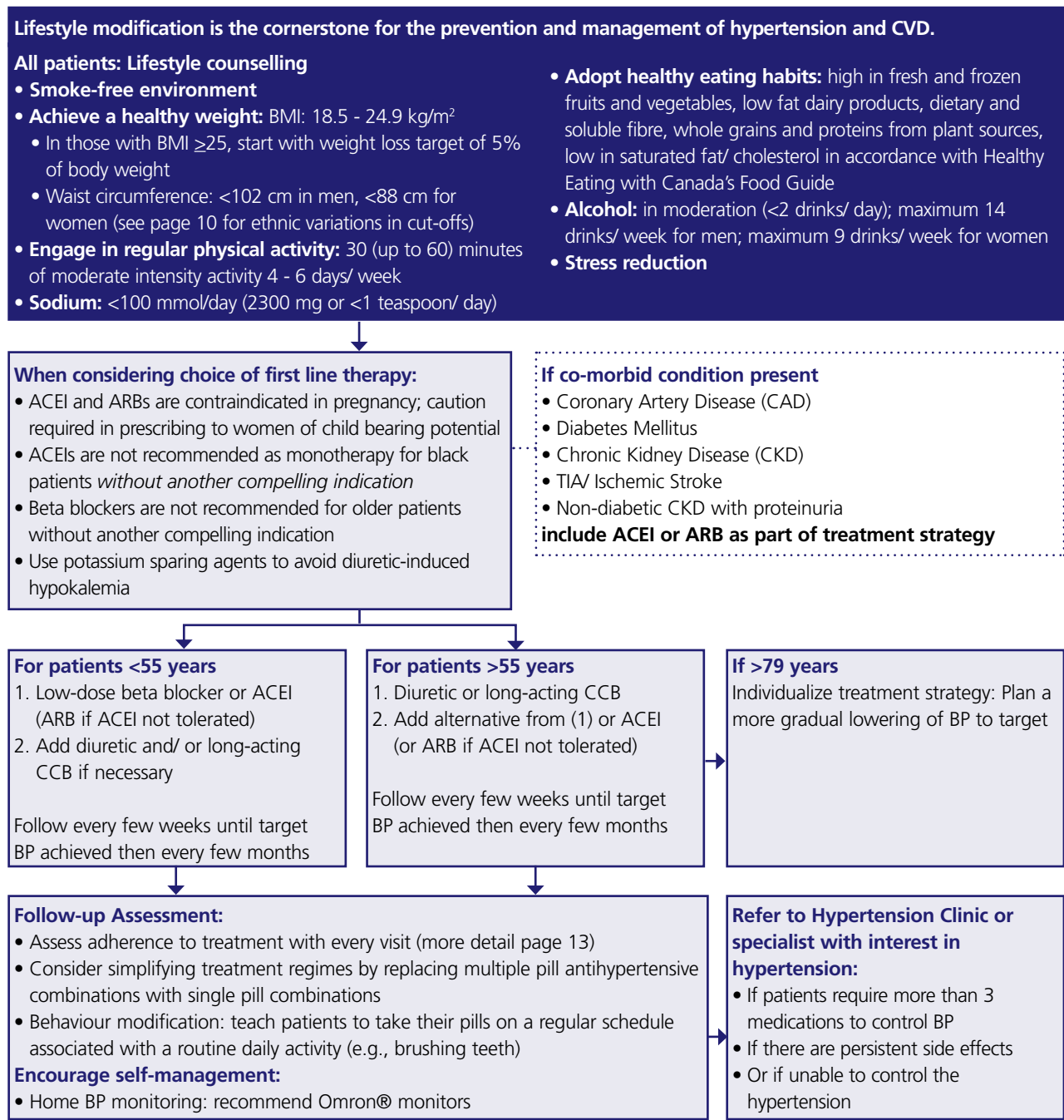


TREATMENT OF HYPERTENSION

Source: Adapted from the Canadian Hypertension Education Program (CHEP). Recommendations for the Management of Hypertension 2006 and 2009 ^{7,15}

KEY CONSIDERATIONS:

- Consider associated CVD risk factors when making treatment decision.
- Treat to target (<140/90 mmHg; <130/80 mmHg in patients with Diabetes or Chronic Kidney Disease).
- 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.





SUPPLEMENTAL INFORMATION

Source: Adapted from the Canadian Hypertension Education Program (CHEP). Recommendations for the Management of Hypertension 2006 and 2009^{7,15}

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.
- 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.

Arm Circumference	Size of Cuff
18 – 26 cm	Child Model
26 – 33 cm	Standard Adult
33 – 41 cm	Large
41 – 47 cm	Extra Large
>47 cm	Thigh Cuff

- 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

VALIDATED QUESTION TO ASSESS HYPERTENSIVE MEDICATION ADHERENCE¹⁶

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

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

NOTES



COMMUNITY RESOURCES - HYPERTENSION

SPECIALTY CLINICS/PROGRAMS:

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

Description: 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. Frances Allan is the clinical nurse, and she has worked at the Heart Institute as a nurse since 1986. The Hypertension Clinic works on a referral-basis from family doctors and other specialists. The Clinic offers: initial assessment (45 min), follow-up assessment, tests and investigations (24 hour blood pressure monitoring, home blood pressure monitoring).

Appropriate for: Patients who require assessment and management of hypertension; specifically those with Diabetes.

Hours: Tues, Wed, Thurs: 9:00 a.m. – 5:00 p.m.

Language: English

Cost: N/A

Referral: Physician referral required.

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.

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: 8:30 a.m. until 4:30 p.m. with telephones answered from 9:00 a.m. until noon and 1:00 p.m. until 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.

**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

Description: Located on third floor of Heart Institute

Appropriate for: UOHI patients as well as for patients referred from their doctor's office

Hours: See Hypertension Clinic hours

Language: English

Cost: \$70.00 (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: **Diagnostic Centre**

University of Ottawa Heart Institute
40 Ruskin Street, Ottawa, ON K1Y 4W7
Tel: 613-761-4639 Fax: 613-761-5369

Description: Located on first floor of the Heart Institute

Appropriate for: Patients referred from their doctor's office

Hours: Daily

Language: English, French

Cost: \$70.00 (cash or cheque); may be waived depending on individual circumstances

Referral: Fax referral to Diagnostic Centre; contact Diagnostic Centre to book appointment; and, inform patient of appointment time.

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: \$70.00

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
Tel: 613-732-2811 ext. 6613 Fax: 613-732-6350

Description: Located in the Lorrain Wing Diagnostics Clinic

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 them 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. and 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
Tel: 613-632-1111 ext. 364 Fax: 613-636-6183

Description: Located in the ECG department

Appropriate for: Patients referred from their doctor's office

Hours: Daily: 7:30 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
Tel: 613-584-1266 ext. 163 Fax: 613-584-3145

Description: Located in Laboratory Services

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
Tel: 613-432-4851 ext. 832 Fax: 613-432-8649

Description: Located in Ambulatory Clinics

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:

Clinic/Program: **Blood Pressure/ Wellness Clinic**

Somerset West Community Health Centre (CHC)
55 Eccles Street, Ottawa, ON K1R 6S3
Tel: 613-238-8210 Fax: 613-238-7595
Check website for schedule updates: www.swchc.on.ca
Contact: Ginette Drouin, Ext. 2351

Description: Blood pressure checks in seniors' building and/ or at community health centres

Appropriate for: Seniors

Hours: Monthly as follows:

1st Tues of the month: 100 Empress, 9:30 a.m. to 11:30 a.m.

3rd Tues of the month: 762 Somerset St. W., 10 a.m. to 11 a.m.

4th Tues of the month: 1041 Wellington St., 9:30 a.m. to 11:30 a.m.

3rd Wed of the month: 865 Gladstone, 1:30 p.m. to 3:30 p.m.

2nd Thurs of the month: 10 Balsam (Italian Club), 1 p.m. to 2 p.m.

2nd Wed of the month: 425 Parkdale (Abbeyfield House), 11 a.m. to 12 p.m.

Language: English, French, Italian

Cost: N/A

Referral: None required



Clinic/Program: **Chinese Blood Pressure and Wellness Clinic**

Somerset West Community Health Centre
55 Eccles Street, Ottawa, ON K1R 6S3
Tel: 613-238-8210 Fax: 613-238-7595
Check website for schedule updates: www.swchc.on.ca

Description: Blood pressure and wellness checks in seniors' buildings and community health centres.

Appropriate for: Chinese-speaking seniors

Hours: Monthly as follows:
1st Tues of the month: 80 Florence, 10 a.m. to 12 p.m. (Cantonese and Mandarin)
2nd Tues of the month: Yet Keen Senior Centre, 10 a.m. to 12 p.m. (Cantonese and Mandarin)
3rd Tues of the month: 395 Somerset, 9 a.m. to 11 a.m. (Cantonese and Mandarin)
4th Tues of the month: 1041 Wellington, 9:30 a.m. to 11:30 a.m. (Cantonese and Mandarin)
4th Thurs of the month: 280 Rochester, 1:30 p.m. to 3:30 p.m. (Cantonese and Mandarin)

Language: Cantonese, Mandarin, Vietnamese, English (if needed)

Cost: N/A

Referral: None required

Clinic/Program: **Cardiovascular Health Awareness Program plus Action Plan (CHAP+AP)**

Cornwall:

Nancy Contant, Coordinator, Carefor,
205 Amelia St. Cornwall, ON K6H 3P3
Tel: 613-932-3451
Email: ncontant@carefor.ca

Pembroke:

Holly Woermky, District Stroke Coordinator,
Pembroke Regional Hospital,
705 Mackay St. Pembroke, ON K8A 1G8
Tel: 613-732-3675 ext. 7310
Email: holly.woermky@pemreghos.org

Description: A community-based program involving blood pressure measurements and CVD and Stroke risk factor assessments. Participants receive tailored counselling and written lifestyle plans. If permitted, copies are sent to family physicians. A Community Health Nurse is on-call during the sessions and a recommendation protocol is used to guide reassessment or referral of patients with very high or very low blood pressure.

Appropriate for: Older adults in the community. It offers opportunities for blood pressure monitoring and other health promotion prevention and management activities addressing modifiable risk factors for CVD and Stroke.

Hours: **Cornwall:** Contact Carefor Health Services for schedule (above)
Pembroke: Contact Pembroke District Stroke Coordinator for schedule (above)

Language: English

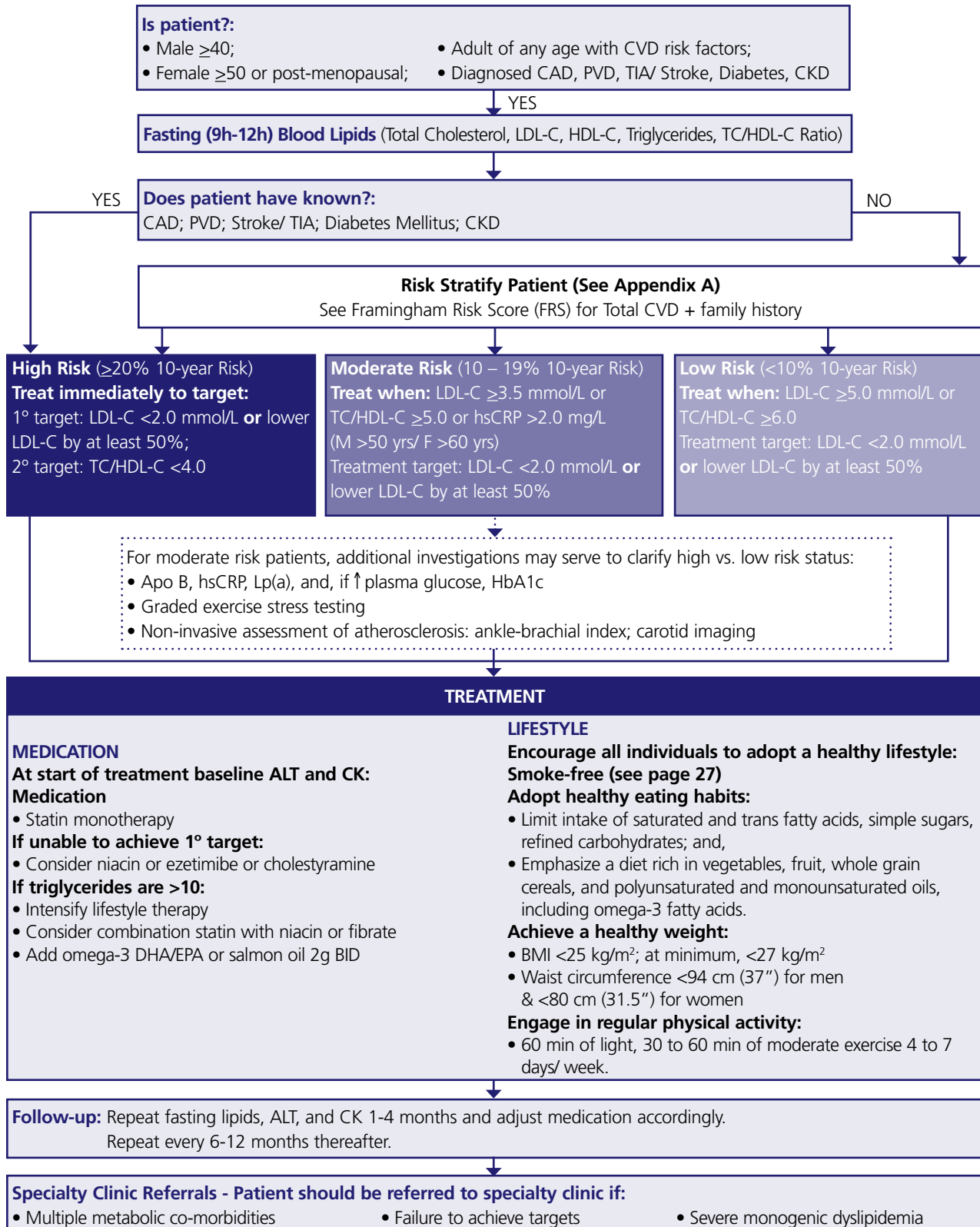
Cost: N/A

Referral: None required



CHOLESTEROL/ DYSLIPIDEMIA

Source: McPherson R, Frohlich J, Fodor G, Genest J. Canadian Cardiovascular Society position statement - Recommendations for the diagnosis and treatment of dyslipidemia and prevention of cardiovascular disease. Can J Cardiol. 2006; 22(11): 913 – 927 and 2009 Update.^{9, 37}





SUPPLEMENTAL INFORMATION

Source: McPherson R, Frohlich J, Fodor G, Genest J. Canadian Cardiovascular Society position statement - Recommendations for the diagnosis and treatment of dyslipidemia and prevention of cardiovascular disease. Can J Cardiol. 2006; 22(11): 913 – 927. ⁹

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

Generic Name	Trade Name	Dose Range	Summary
Statins			<ul style="list-style-type: none"> • Generally well tolerated. • 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 is 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. • Statin-induced myopathy is a well-established but rare side effect. The incidence of myalgia is approximately 3% to 4% in statin-treated patients vs. 2% in placebo-treated individuals. • Statin induced myositis (muscle discomfort + CK >10 times normal limit) occurs in <0.1% of treated patients and requires prompt discontinuation of drug therapy; patients at most risk are elderly and/ or multiple co-morbidities. • In high risk patients, CK levels at baseline and advise to stop medication if significant symptoms develop. • Use lower dose ranges in persons of South and East Asian origin.
Atorvastatin	Lipitor	10 – 80 mg	
Fluvastatin	Lescol	20 – 80 mg	
Lovastatin	Mevacor	20 – 80 mg	
Simvastatin	Zocor	10 – 80 mg	
Pravastatin	Pravachol	10 – 40 mg	
Rosuvastatin	Crestor	5 – 40 mg	
Bile Acid and/ or Cholesterol Absorption Inhibitors			
Cholestyramine	Questran	2 - 24 g	
Colestipol	Colestid	5 - 30 g	
Ezetimibe	Ezetrol	10 mg	
Fibrates			<ul style="list-style-type: none"> • 15 – 20% increase in plasma creatinine is common (higher when underlying renal disease). • Initiate at lowest available dose; increase only after re-evaluation of renal function. • Do not use gemfibrozil in combination with a statin.
Bezafibrate	Bezalip	400 mg	
Gemfibrozil	Lopid	600 – 1200 mg	
Fenofibrate	Lipidil Micro Lipidil Supra Lipidil EZ	100 mg – 200 mg 160 mg 145 mg	
Niacin			<ul style="list-style-type: none"> • *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 one and three 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 to 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.
Nicotinic acid	Crystalline niacin	1 - 3 g	
Ext. release	Niaspan*	0.5 – 2 g	



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: 613-761-5281

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. to 12:00 p.m.

Language: English, French

Cost: N/A

Referral: 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-Fri, 8 a.m. to 5 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.

**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:** 8:30 a.m. until 4:30 p.m. with telephones answered from 9:00 a.m. until noon and 1:00 p.m. until 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. 522

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
Contact: Beth Mansfield, Registered Dietitian
E-mail: bmansfield@ottawaheart.ca
Website: www.peakperformance.ca

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.

Get Moving (\$30/p) Start where you are and go wherever your goals take you. Develop a physical activity plan of action to lower LDL-cholesterol and triglycerides and increase HDL-cholesterol levels. Learn how to safely begin your own physical activity program based on your health goals.

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

Workshop: **Heart Delicious Nutrition Workshops**

Heart Health Education Centre (HHEC)
University of Ottawa Heart Institute
40 Ruskin Street, Ottawa, ON. K1Y 4W7
Tel: 613-761-4753 or 1-866-399-HHEC (4432)
Website: www.ottawaheart.ca/heart_disease/heart_health_education_centre.htm

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 and improve the health of your arteries. Get the facts on fat, cholesterol, dietary fibre and salt.

Heart Healthy Shopping: Learn the tools to better understand food labels, develop heart healthy shopping lists, and plan meals.

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

Bien s'alimenter A à Z: A 2-hour session, only offered in French, which summarizes the 3 nutrition workshops above.

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

Hours: Refer to schedule online or contact HHEC for details.

Language: English, French

Cost: Free, unless specified

Referral: Registration required by telephone



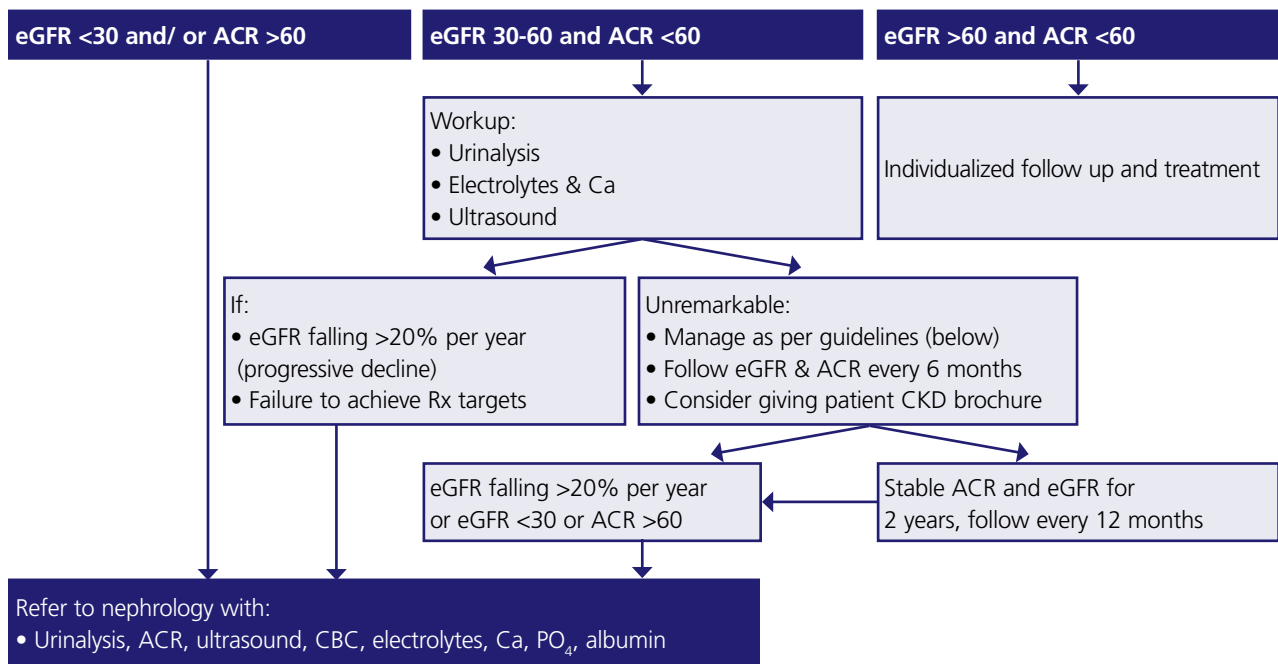
DETECTION & REFERRAL OF CHRONIC KIDNEY DISEASE (CKD)

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
(also needs ultrasound of kidneys)
- Patients with autoimmune disease
- Patients with vascular disease
- Patients with unexplained anemia
- 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:**



Implement measures to modify CV risk factors

- Lifestyle modification, smoking cessation
- Treat cholesterol to target as per CV risk factors
- Consider ASA 81 mg daily
- 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 <130/80
- 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)
- See: www.ottawahospital.on.ca/hp/cpg/eGFR-e.pdf for The Ottawa Hospital Referral Guidelines



COMMUNITY RESOURCES - CHRONIC KIDNEY DISEASE

Clinic/Program: **The Ottawa Hospital Nephrology Clinic**

5th Floor, Riverside Campus
Tel: 613-738-8207 Fax: 613-738-8384

Description: The Nephrology Clinic 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. to 5:00 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 The Ottawa Hospital Nephrology Clinic:

- 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

For more information: Ottawa Hospital Nephrology Website

English: www.ottawahospital.on.ca/hp/cpg/index-e.asp

French: www.ottawahospital.on.ca/hp/cpg/index-f.asp

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.

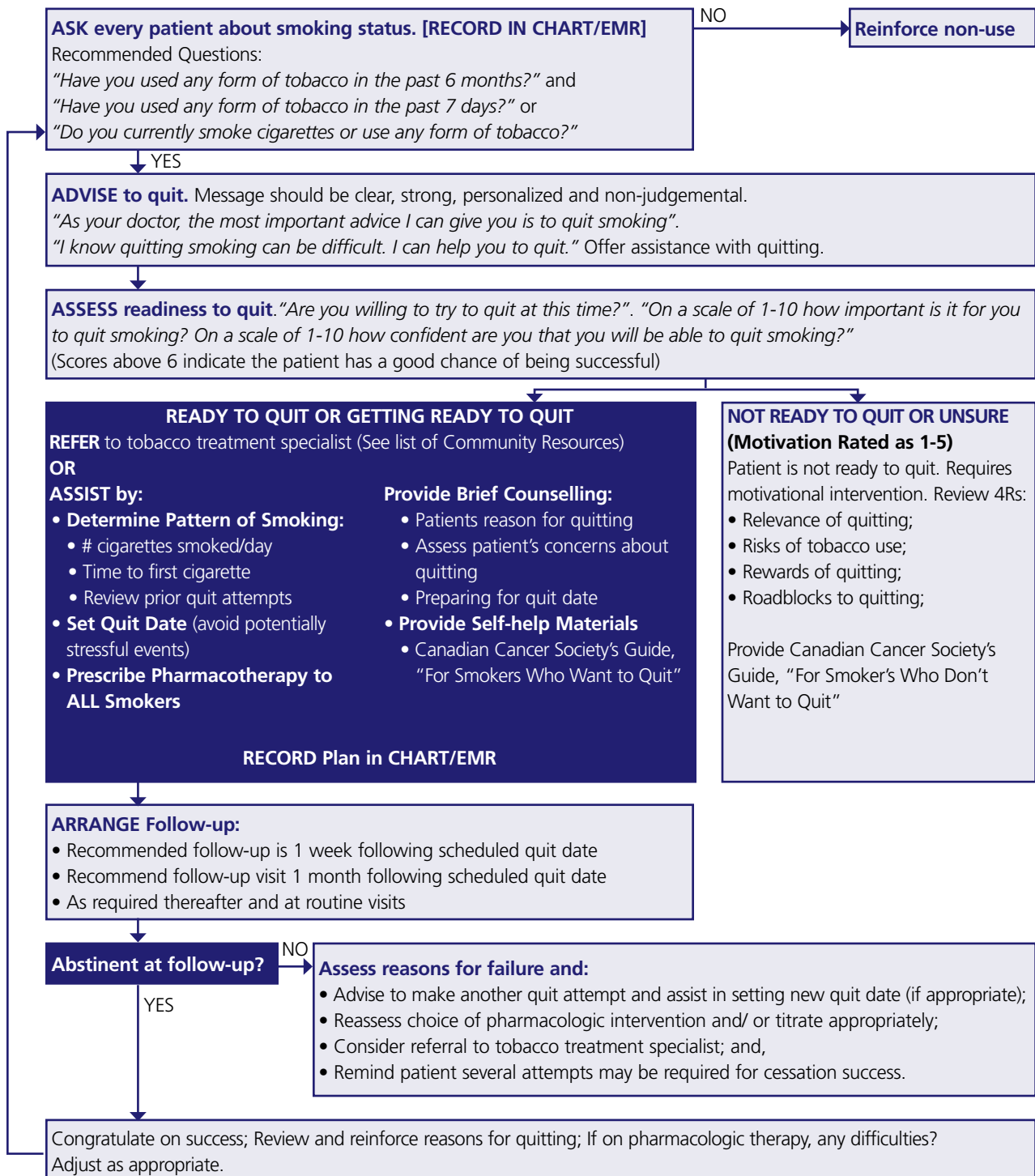
NOTES



SMOKING CESSATION

Source: Adapted from the following sources: Canadian Tobacco Intervention. Smoking Progress Notes www.omacti.org¹⁸;
 Fiore MC, Jaén CR, Baker TB, et al. Treating Tobacco Use and Dependence: 2008 Update. Clinical Practice Guideline. 2008¹⁹;
 Smoking Cessation, Guideline for Clinical Care. University of Michigan Health System. 2006.²⁰

A HEALTH PROFESSIONAL'S ADVICE TO QUIT SMOKING CAN INCREASE QUIT RATES BY UP TO 30%.





SUPPLEMENTAL INFORMATION

OVERVIEW OF SMOKING CESSATION PHARMACOTHERAPIES

All patients should receive a recommendation to use effective pharmacotherapies as an aid to cessation. The best quit plan is one that combines medications with behavioural change, such as those learned through smoking cessation programs or self-help material.

NICOTINE GUM

Typical Dose / Treatment Period	<p>Recommend:</p> <ul style="list-style-type: none"> • 2 mg gum if patient smokes first cigarette at least 30 minutes after waking • 4 mg gum if patient smokes first cigarette within 30 minutes of waking <p>One piece every 1-2 hours for weeks 1 through 6 One piece every 2-4 hours for weeks 7 through 9 One piece every 4-8 hours for weeks 10 through 12</p>
Instructions for Use	<ul style="list-style-type: none"> • Nicotine gum should be chewed slowly until you can taste the nicotine or feel a slight tingling in your mouth, then stop chewing. • Place the gum between your cheek and gum. After one minute, repeat the process until cravings are resolved. • Chew each piece for about 30 minutes. • Avoid eating or drinking 15 minutes before or during use.
Titration	NRT may be titrated to meet individual patient needs (appropriate doses are reflected in an elimination of craving/ withdrawal symptoms). The duration of use of NRT products may be extended considerably in order to achieve cessation success.
Advantages	<ul style="list-style-type: none"> • Ease of use • Over-the-counter • Can be used at times of increased craving • Can supplement other NRT products
Potential Disadvantages	<ul style="list-style-type: none"> • Clings to dental work • Possible nausea, belching, hiccups (<20%) • Possible jaw pain
Considerations	<p>Patients with CVD: Cardiac patients who cannot quit should be among those considered for NRT.</p> <p>Pregnant/ nursing smokers: Pregnant/ nursing women who cannot quit should be considered for NRT.</p> <p>Smokers under the age of 18: NRT should be considered for all smokers who need NRT to quit, including those under 18. See additional information on page 35 regarding myths and facts about smoking.</p>



NICOTINE INHALER

Typical Dose / Treatment Period	Provides hand-to-mouth motion of smoking <ul style="list-style-type: none"> • Puff continuously for 20 minutes (1 cartridge) or as needed to manage cravings. • Use 6-12 cartridges per day for first 6 weeks. • Reduce the amount of cartridges used per day in weeks 6-12. • Some smokers require 1-2 cartridges per day beyond 12 weeks to manage cravings.
Instructions for Use	<ul style="list-style-type: none"> • You puff as needed to manage cravings. • Inhale 80 puffs over 20 minutes or until cravings are gone. Often, using the inhaler for 5 minutes is enough. • Take slow puffs to avoid throat burn. • Avoid eating or drinking 15 minutes before or during use.
Titration	NRT may be titrated to meet individual patient needs (appropriate doses are reflected in an elimination of craving/ withdrawal symptoms). The duration of use of NRT products may be extended considerably in order to achieve cessation success.
Advantages	<ul style="list-style-type: none"> • Ease of use • Over-the-counter • Mimics hand to mouth action of cigarette smoking • Rapid uptake through oral mucosa and can facilitate the management of acute cravings • More precise control of nicotine needs • Can supplement other NRT products
Potential Disadvantages	<ul style="list-style-type: none"> • Possible cough, headache, nausea, mouth/ throat irritation • Avoid eating or drinking 15 minutes before or during use
Considerations	<p>Patients with CVD: Cardiac patients who cannot quit should be among those considered for NRT.</p> <p>Pregnant/ nursing smokers: Pregnant/ nursing women who cannot quit should be considered for NRT.</p> <p>Smokers under the age of 18: NRT should be considered for all smokers who need NRT to quit, including those under 18.</p> <p>See additional information on page 35 regarding myths and facts about smoking.</p>



NICOTINE PATCH

Typical Dose / Treatment Period	See dosing instructions (below) Recommended use is 8–12 weeks but is often required for longer.
Instructions for Use	<ul style="list-style-type: none"> • Apply the patch to a clean, dry, non-hairy area on the upper part of your body (arms, chest, back). • Replace the patch with a new one every 24 hours. • Be sure to remove the old patch before putting on a new one. • If you have difficulty sleeping remove your nicotine patch at bedtime.
Titration	NRT may be titrated to meet individual patient needs (appropriate doses are reflected in an elimination of craving/ withdrawal symptoms). The duration of use of NRT products may be extended considerably in order to achieve cessation success.
Advantages	<ul style="list-style-type: none"> • Ease of use • Over-the-counter • Discrete • Steady state
Potential Disadvantages	<ul style="list-style-type: none"> • Possible skin irritation • Possible sleep disturbance
Considerations	<p>Patients with CVD: Cardiac patients who cannot quit should be among those considered for NRT.</p> <p>Pregnant/ nursing smokers: Pregnant/ nursing women who cannot quit should be considered for NRT.</p> <p>Smokers under the age of 18: NRT should be considered for all smokers who need NRT to quit, including those under 18.</p> <p>See additional information on page 35 regarding myths and facts about smoking.</p>

DOSING INSTRUCTIONS FOR NICOTINE PATCH

The following protocol is recommended when prescribing/ recommending the NRT patch to smokers.

Step 1 Protocol Smoking > 20 cigarettes per day	Step 2 Protocol Smoking 10-20 cigarettes per day	Step 3 Protocol Smoking < 10 cigarettes per day
Nicotine patch 21 mg topical application daily x 6 weeks;	Nicotine patch 14 mg topical application daily x 6 weeks;	Nicotine patch 7 mg topical application daily x 6 weeks.
Then nicotine patch 14 mg topical application daily x 2 weeks;	Then nicotine patch 7 mg topical application daily x 4 weeks.	
Then Nicotine patch 7 mg topical application daily x 2 weeks.		
<ul style="list-style-type: none"> • If within 48 hours of initial application, withdrawal or cravings persist, add nicotine patch 7 mg. May repeat to a maximum of 2 doses. 	<ul style="list-style-type: none"> • If within 48 hours of initial application, withdrawal or cravings persist, increase to nicotine patch 21 mg, and follow step one protocol. 	<ul style="list-style-type: none"> • If within 48 hours of initial application, withdrawal or cravings persist, increase to nicotine patch 14 mg, and follow step two protocol.
<ul style="list-style-type: none"> • Add other forms of NRT (gum or inhaler) to address cravings as necessary. 	<ul style="list-style-type: none"> • Add other forms of NRT (gum or inhaler) to address cravings as necessary. 	<ul style="list-style-type: none"> • Add other forms of NRT (gum or inhaler) to address cravings as necessary.
<ul style="list-style-type: none"> • It may be necessary for some patients to remain on NRT longer than above schedule. 	<ul style="list-style-type: none"> • It may be necessary for some patients to remain on NRT longer than above schedule. 	<ul style="list-style-type: none"> • It may be necessary for some patients to remain on NRT longer than above schedule.
<ul style="list-style-type: none"> • It may be necessary for some patients to remain on a particular step of NRT longer than above schedule. 	<ul style="list-style-type: none"> • It may be necessary for some patients to remain on a particular step of NRT longer than above schedule. 	<ul style="list-style-type: none"> • It may be necessary for some patients to remain on a particular step of NRT longer than above schedule.



BUPROPION (ZYBAN®)

Typical Dose / Treatment Period	<p>Begin taking Bupropion 8 days before quit date.</p> <p>Day 1-3: Take 150 mg or 1 tablet EVERY morning.</p> <p>Day 4-Week 12: 150 mg TWICE DAILY (8 hours apart).</p> <p>The usual duration of Bupropion is 12 weeks; however, some people may continue to take it up to 24 weeks.</p>
Instructions for Use	<p>Ensure at least 8 hours between doses.</p> <p>No alcohol use.</p>
Titration	Yes (to initiate therapy)
Advantages	<ul style="list-style-type: none"> • Non-nicotine therapy • Exceeded effectiveness of NRT in clinical trials • May be helpful in smokers with history of depression (antidepressant effect) • 52 weeks of possible use
Potential Disadvantages	<ul style="list-style-type: none"> • 0.1% seizure risk • Possible insomnia, dry mouth, headache, agitation • Skin rash, non specific sense of unease/ anxiety • Drug interactions <p>A reduction in dose (e.g. 150 mg qd) may address presence of many side effects while not significantly reducing smoking cessation efficacy.</p>
Considerations	<p>Bupropion is contraindicated in patients if:</p> <ul style="list-style-type: none"> • History of seizure disorder/ history of head trauma; • Taking anti-depressants, antipsychotics, corticosteroids, MAO inhibitors, theophylline, cocaine or diet pills; • Presently taking Bupropion/ Zyban/ Wellbutrin as an antidepressant; • Previous reaction to Bupropion/ Zyban/ Wellbutrin; • Pre-existing or current eating disorder (bulimia, anorexia nervosa); • Report excessive use of alcohol or sedatives presently or in past; • Taking a quinolone antibiotic (e.g. ciprofloxacin, levofloxacin); • Severe hepatic impairment; • Pregnant or breast feeding; • Central nervous system tumour; • Use of oral hypoglycemic products or insulin.



VARENICLINE (CHAMPIX®)

Typical Dose / Treatment Period	<p>The patient should set a date to stop smoking. Varenicline dosing should be started 1-2 weeks before the quit date.</p> <p>The patient should be treated with Varenicline for 12 weeks. For patients who have successfully stopped smoking at the end of 12 weeks, an additional course of 12 weeks treatment with Varenicline may be considered.</p> <p>To optimize the success of the therapy, patients should be titrated up to the maximum recommended dose of 1 mg twice daily using the following 1-week titration schedule:</p> <ol style="list-style-type: none"> 1. Days 1-3: Varenicline 0.5 mg once daily 2. Days 4-7: Varenicline 0.5 mg twice daily 3. Day 8 through to week 12: Varenicline 1.0 mg twice daily <p>Patients should return for follow-up assessment no later than 3 weeks after initiating Varenicline. Patients who cannot tolerate adverse effects of Champix may have the dose lowered temporarily or permanently.</p>
Instructions for Use	<p>Medication should be taken with meals and a full glass of water.</p> <p>Patients are to be asked to contact their physician if they experience nausea after initiating this drug.</p>
Titration	<p>Yes (to initiate therapy)</p>
Advantages	<ul style="list-style-type: none"> • Twice as effective as Bupropion or NRT in clinical trials • Non-nicotine therapy • No interactions
Potential Disadvantages	<p>Side effects: Nausea</p>
Considerations	<p>Varenicline is contraindicated in patients if:</p> <ul style="list-style-type: none"> • Previous drug reaction to Varenicline; • Under the age of 18 years; • Pregnant or breast feeding; • History of renal failure and is taking Cimetidine; • Using NRT in addition to Varenicline; • History of nausea and vomiting in past two months; • History of renal failure.



MYTHS AND FACTS ABOUT SMOKING CESSATION

Source: Adapted from Rethinking Stop-Smoking Medications: Treatment Myths and Medical Realities. Ontario Medical Association, January, 2008.²¹

Myth: There is little that can be done to assist a smoker who is not ready to quit.

Fact: 40% of smokers say their physician’s advice played an important role in their motivation to quit. A physician/ health professional’s advice to quit has been shown to increase success with quitting by 30%.

Myth: Smoking while on the patch increases the risk of heart attack.

Fact: The use of NRT does not increase the smoker’s cardiovascular risk.

Myth: Patients with heart disease should not use the nicotine patch or gum.

Fact: It is more dangerous for patients with heart disease to continue to smoke than to use NRT. Cardiac patients who cannot quit should be among those considered for NRT.

Myth: Pregnant smokers should not use nicotine gum or the patch.

Fact: The nicotine patch and gum are safer than smoking for the pregnant woman and her fetus; 58% of pregnant smokers continue to smoke during pregnancy. Pregnant women who cannot quit should be considered for NRT.

Myth: Smokers under 18 should not use NRT.

Fact: Most daily smokers begin smoking before age 18. The nicotine patch, gum, and inhaler are far safer than smoking. NRT should be considered for all smokers who need NRT to quit, including those under 18.

Myth: Stop-smoking medications are not effective in helping people quit.

Fact: NRT, Bupropion, and Varenicline are effective, government-approved medications available to help smokers. NRT, Bupropion, and Varenicline have each been found to approximately double quitting rates compared to placebo.

Myth: Use of nicotine patch and gum should not exceed 3 months.

Fact: The nicotine patch and gum should be used as long as needed to maintain and prolong tobacco abstinence.

Myth: There is little incentive to quit smoking if the patient is healthy/ does not have diagnosed disease.

Fact: Quitting smoking at any age offers benefits to a smoker. Smokers who quit at younger ages will on average increase their life expectancy as compared to those who quit smoking at later ages. As such, ensuring younger smokers are encouraged and supported to quit smoking is important.

Age at Quitting	Years of Life Preserved
30	10
40	9
50	6
60	3

Source: Doll R, Peto R, Boreham J, et al. Mortality in relation to smoking: 50 years’ observation on male British doctors. BMJ. 2004; 328:15-19.²²



COMMUNITY RESOURCES – SMOKING CESSATION

OPTIONS FOR NRT AT LOW OR NO COST

Walmart: \$24.99 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. Will provide for 6 weeks.

Employer: Often covers the cost through employee assistance programs.

STOP Study: University of Ottawa Heart Institute (UOHI) Quit Smoking Clinic and Hawkesbury & District General Hospital Out-Patient Smoking Cessation Program. Patients must join clinic to have access to study. Free NRT (any form) for 10 weeks.

PROVINCIAL QUIT SMOKING SERVICES

Clinic/Program: **Smokers' Helpline**

Canadian Cancer Society
 Tel: 1-877-513-5333

Description: TELEPHONE-BASED ASSISTANCE: 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.

Appropriate for:

- Smokers who want to quit, may be thinking about quitting, or need support to remain smoke-free
- Family members
- Health professionals

Hours: Mon to Thurs: 8:00 a.m. – 9:00 p.m.
 Fri: 8:00 a.m. – 6:00 p.m.
 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**

Canadian Cancer Society
www.smokershelpline.ca

Description: WEB-BASED ASSISTANCE: 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.

Appropriate for: All smokers

Hours: 24/7

Language: English, French

Cost: N/A

Referral: Self-referral



CITY OF OTTAWA

Clinic/Program: **Quit Smoking Program**
Heart Health Education Centre
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

Description: Located at the UOHI, this individualized program is staffed by physicians and nurses who specialize in smoking cessation. Program involves four major components: behavioural therapy, addictive disorders therapy, pharmacologic therapy, and relapse prevention.

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: *Self-referral:* Contact clinic for appointment
Physician referral: Fax referral. Please inform patient that clinic will contact them directly.

Clinic/Program: **Drop-in Cessation Program**
Royal Ottawa Hospital
1145 Carling Avenue, Lady Grey Bldg, Room 2006, Ottawa, ON
Tel: 613-722-6521

Description: Drop-in for the psychiatric community

Appropriate for: Psychiatric community

Hours: Drop-in every Tuesday, 6:30 p.m. – 7:30 p.m.

Language: English, French

Cost: N/A

Referral: Self-referral. No registration required.

Clinic/Program: **Kick Butt for 2 - Young/Single Parents of Ottawa**
St. Mary's Home Community Outreach and Program Centre: Tel: 613-749-2491
Salvation Army Bethany Hope Centre: Tel: 613- 725-1733
Youville Centre: Tel: 613-231-5150

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



CITY OF OTTAWA (CONTINUED)

ACCESSIBLE 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:

Member of A.C.E.S.S.
 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.
 Schedule and location of quit smoking programs posted 3 times per year. See below for locations.

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

Centertown Community Health Centre Tel: 613-233-4443
 420 Cooper St., Ottawa, ON

Hunt Club Riverside Community Service Centre Tel: 613-247-1600
 3310 McCarthy Road, Ottawa, ON

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

Orléans-Cumberland Community Resource Centre Tel: 613-830-4357
 211-210 Centrum Boulevard, Orléans, ON

Overbrook-Forbes Community Resource Centre Tel: 613-745-0073
 225 Donald Street, Unit 120, Ottawa, ON

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

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

Somerset West Community Health Centre Tel: 613-238-8214
 55 Eccles Street, Ottawa, ON

South-East Ottawa Centre for a Healthy Community Tel: 613-737-5195
 1355-600 Bank Street, Ottawa, ON

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

Western Ottawa Community Resource Centre Tel: 613-591-3686
 2 MacNeil Court, Kanata, ON

Appropriate for: All adult smokers

Hours: Vary – contact OPH

Language: English and/ or French

Cost: N/A

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
Various locations across five counties based on demand.

Hours: Offered in fall and winter

Language: English, French

Cost: N/A

Referral: Self-referral

Clinic/Program: **Out-Patient Smoking Cessation Program**

Hawkesbury & District General Hospital
Contact: Dierdre Gilbert
Tel: 613-632-1111 Ext. 168

Description: Five weeks of Nicotine Replacement Therapy (nicotine gum, patch or inhaler) and brief counselling session.

Appropriate for: Residents of Ontario who are 18 and over and want to quit smoking using NRT.

Hours: Clinic hours weekdays and evenings

Language: English, French

Cost: N/A

Referral: Self-referral

RENFREW COUNTY & DISTRICT

Clinic/Program: **Renfrew Country and District Health Unit**

7 International Drive, Pembroke, ON
Tel: 613-732-3629 or Toll Free: 1-800-267-1097

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

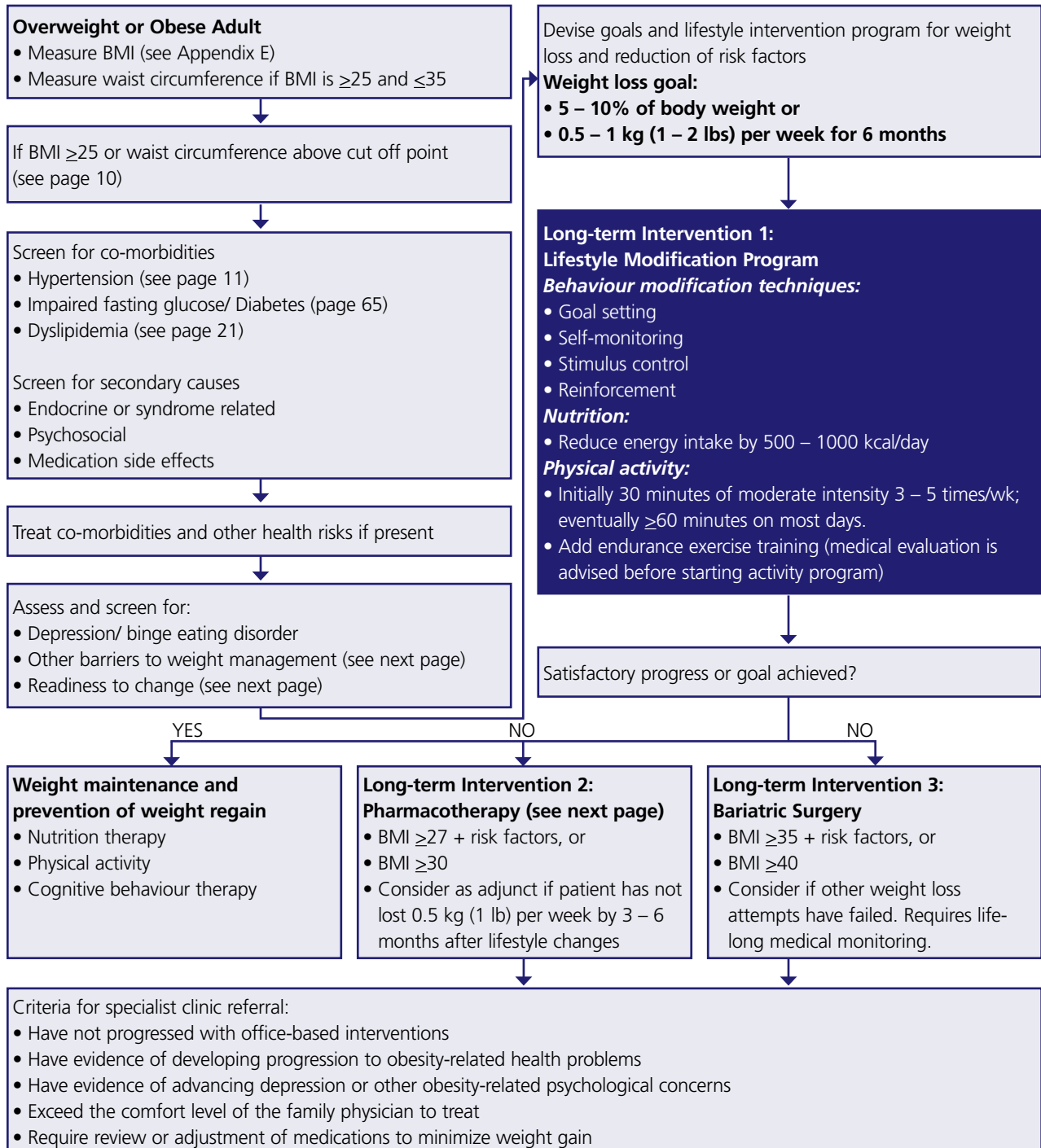
Referral: Self-referral



OBESITY & WEIGHT MANAGEMENT

Source: Adapted from Lau DCW, Douketis JD, Morrison KM, Hramiak IM, Sharma AM, Ur E for members of the Obesity Canada Clinical Practice Guidelines Expert Panel. 2006 Canadian clinical practice guidelines on the management and prevention of obesity in adults and children [summary]. CMAJ. 2007; 176 (8): S1 – S14. ¹⁴

Excess weight is a chronic medical condition analogous to, but more prevalent than, hypertension. It requires long-term intervention. However, unlike hypertension, there are only three long-term treatments: lifestyle modification, medications, or bariatric surgery.





SUPPLEMENTAL INFORMATION

OTHER BARRIERS TO WEIGHT MANAGEMENT

Patients:

- May not be ready to take charge of their weight management
- May have sleep apnea which interferes with ability to plan and focus on health activities
- May be hypothyroid
- May be taking medications that result in weight gain, e.g.: tricyclic antidepressants, antidiabetic agents, corticosteroids

Health Care Professionals:

- May have knowledge gaps about the complex causes of obesity and effective and available treatment and management strategies
- May require new skills in assessment and intervention around readiness to change
- May need to consider chronic disease approach to support and follow-up throughout treatment

SCRIPT FOR A BRIEF OFFICE VISIT

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

"Your BMI/ weight is _____. People with BMI/ weight in this range are at risk for heart disease and Diabetes..."

"What do you think of this information?"

"What are your ideas on how you might make some healthy changes?"

"How ready are you to take the next step?" (Rate on scale 0-10. See below)

SCALE: 0 – 10

0 – 3: Not ready <i>"What might make you more ready?"</i>	4 – 6: Getting ready <i>"What might your next steps be?"</i>	7 – 10: Ready <i>"What is your plan?"</i>
<ul style="list-style-type: none"> • Acknowledge patient's decision • Address co-morbidities • Repeat with each visit at physician discretion 	<ul style="list-style-type: none"> • Advise 5 – 10% weight loss has significant benefits • Discuss treatment options (see community resources) • Discuss treatment priorities 	<ul style="list-style-type: none"> • Collaborate on treatment strategy and goals • Assess gaps in knowledge, barriers to meeting goals • Discuss strategies to increase physical activity • Discuss follow-up plan

PHARMACOTHERAPY

- Should be considered in overweight/ obese adults not attaining clinically important weight loss with lifestyle intervention
- Should be considered with overweight/ obese patients with Type 2 Diabetes or impaired glucose tolerance or other risk factors for Diabetes not attaining clinically important weight loss to improve glycemic control and reduce risk factors

Name	Class	Dose	Action	Adverse Effects
Sibutramine (Meridia, Reductil) *not covered by Ontario Drug Benefit (ODB) ~\$140/mth	Serotonin and noradrenalin uptake inhibitor	10 – 15 mg once daily in AM	<ul style="list-style-type: none"> • Enhances satiety • May ↑ thermogenesis • May prevent decline in energy expenditure with weight loss 	<ul style="list-style-type: none"> • Dry mouth • Constipation • Dizziness
Orlistat (Xenical) *not covered by ODB ~\$160/mth	Gastro-intestinal lipase inhibitor	120 mg; 3 times daily with each meal	<ul style="list-style-type: none"> • Inhibits pancreatic lipase • Reduces fat absorption by 30% 	<ul style="list-style-type: none"> • Abdominal bloating • Pain and cramping • Steatorrhea • Fecal incontinence

SURGICAL TREATMENT OF MORBID OBESITY:

- Is effective and safe therapy in morbidly obese patients (criteria: BMI >40 or >35 with co-morbid conditions)
- Contact The Ottawa Hospital Weight Management Clinic for referral information



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: www.ottawahospital.on.ca/programs/weightclinic/index-e.asp
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. 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 a.m. to 4 p.m.

Language: English

Cost: Depends on program

Referral: Physician referral required

To refer: Download referral form: www.ottawahospital.on.ca/programs/weightclinic/pdf/referral-e.pdf; 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.

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: inquiries@drbishop.ca
Website: www.drbishop.ca
Director: Dr. Douglas Bishop

Description: Dr. Douglas R. Bishop & Associates Healthy Weight Management Alternatives is 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 and Wed: 8 a.m. to 5 p.m.

Tues: 8 a.m. to 6:30 p.m.

Thurs: 8:30 a.m. to 5:30 p.m.

Fri: 7:30 a.m. to 1 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:** **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: Helene Charlebois

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 6.2-7 mmol/L

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

Hours: By appointment

Language: English, French

Cost: \$350 (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: **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: By appointment

Language: English

Cost: Exact cost \$1,485 (+ GST) regardless of amount of weight to be lost. No hidden fees or required product purchases.

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: oa-ottawa@mail.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: Everyone who wants to stop eating compulsively

Hours: Vary

Language: English, French

Cost: N/A

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, Arnprior, Chesterville, Casselman, Smiths Falls, Plantagenet, Newington, Morrisburg, Perth, Renfrew

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: **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: \$26.50 joining fee + \$15.90 weekly fee

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 a.m. to 5 p.m.

Language: English, French

Cost: \$30 registration fee + \$8 weekly/ \$14 bi-weekly weigh-in fee

Referral: Self-referral

Clinic/Program: **Heart Delicious Nutrition Workshops**

Heart Health Education Centre (HHEC)

University of Ottawa Heart Institute

40 Ruskin Street, Ottawa, ON, K1Y 4W7

Tel: 613-761-4753 or 1-866-399-HHEC (4432)

Description: **ABCs to Heart Healthy Eating:** Develop the skills for heart healthy eating to improve the health of your arteries. Get the facts on fat, cholesterol, fibre and salt.

Heart Healthy Shopping: Learn the tools to better understand food labels, develop heart healthy shopping lists, and plan meals.

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

Hot Topics in Heart Health for Nutrition: Expand the knowledge you got in the ABCs workshop! An update on various topics related to heart disease such as Mediterranean diet, antioxidants, omega-3 fats, glycemic index, and supplements.

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

Hours: See schedule: www.ottawaheart.ca/UOHI/doc/HHECworkshops.pdf

Language: English, French

Cost: N/A

Referral: Registration required by telephone

Clinic/Program: **Primacy Registered Dietitian Services**

Locations: 12 area grocery stores

Tel: 1-877-637-8589

E-mail: eatwell@primacydietitians.ca

Description: Registered dietitians available within grocery stores to provide one-on-one counselling and supermarket tours.

Appropriate for: Members of the public who are interested in learning about healthy eating and nutrition

Hours: Vary by location

Language: English, French (depending on location)

Cost: N/A

Referral: Self-referral



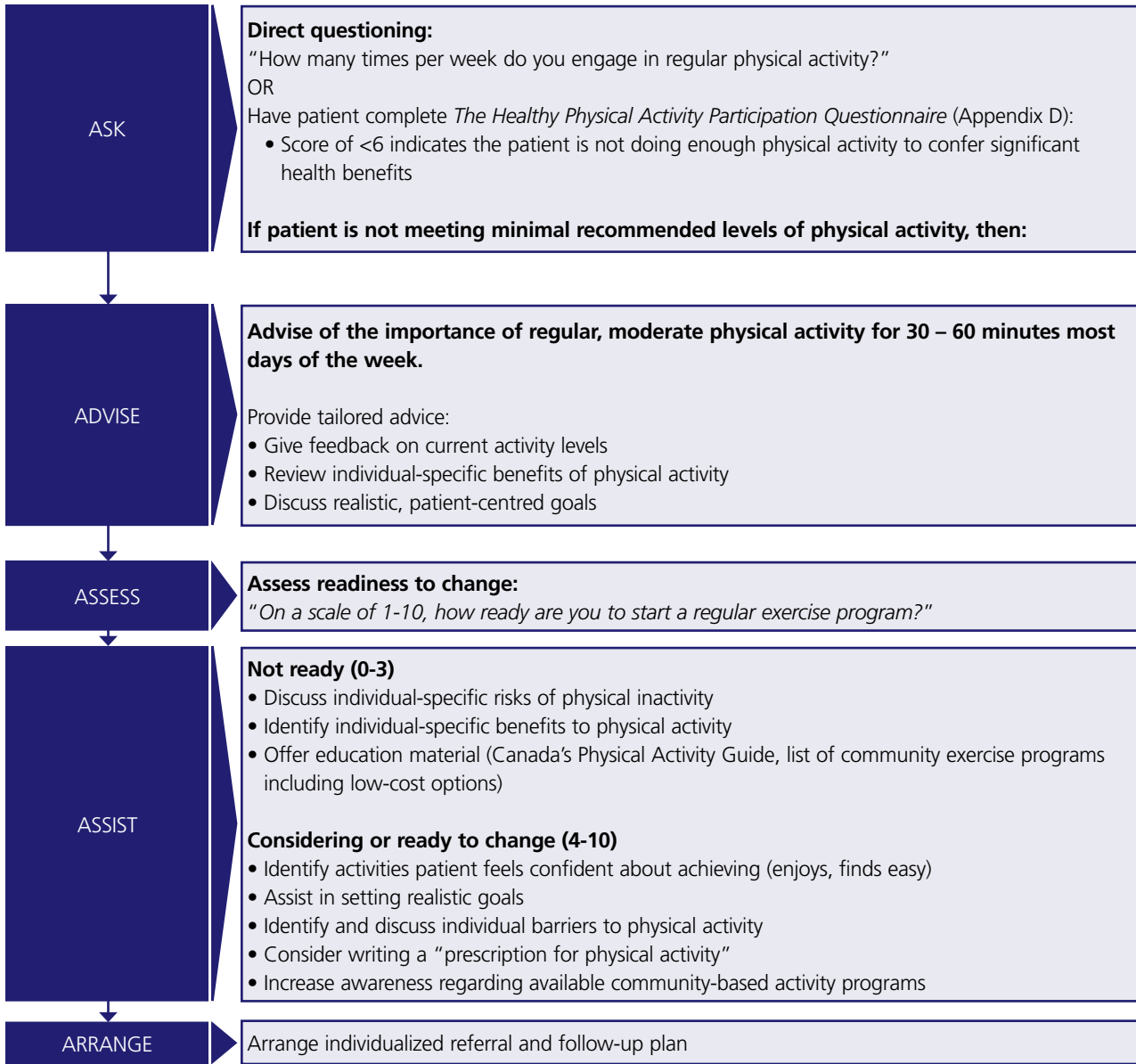
PHYSICAL ACTIVITY

Reference: Adapted from the following sources: PACE Canada²³; Australia Heart Foundation. Getting patients more active: Practical information for general practices (2005)³²; and Australian General Practice. Lifescripts: Physical activity: Helping patients to become more active (2004)³³.

RECOMMENDED LEVEL FOR PHYSICAL ACTIVITY IS 30 – 60 MINUTES OF MODERATE PHYSICAL ACTIVITY (E.G.: BRISK WALKING) ON MOST DAYS OF THE WEEK

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





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* 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).

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
- Adult hockey players
- Women with limited income
- Older adults with osteoporosis

SPORTS ASSOCIATIONS

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

- Cycling
- Curling
- Rowing
- Cross-country skiing
- Tennis

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.



TIA & ISCHEMIC STROKE

Source: Adapted from The Canadian Stroke Strategy. Canadian best practice recommendations for Stroke Care 2006.²⁶

DIAGNOSIS OF TIA & ISCHEMIC STROKE

Major signs of TIA/ Stroke include but are not restricted 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)
- **Loss of balance**, dizziness especially with any of the above signs
- **Headache** (severe and unusual)

Suspected TIA/ Stroke

Early ≤7 days	Sub-acute 7 days to 3 months	Late ≥3 months
Suspected Stroke → CT head NOW to rule out intracranial hemorrhage TIA → CT head within one week	Suspected Stroke → CT head NOW to rule out intracranial hemorrhage TIA → CT head within one week	Suspected Stroke → CT head within 2 weeks to rule out intracranial hemorrhage TIA → CT head within 2 weeks
Carotid Doppler within 24 hours	Carotid Doppler within 2-3 days	Carotid Doppler within 2 weeks
ECG now	ECG now	ECG within 2 weeks
CBC, Na ⁺ , K ⁺ , Cl ⁻ , CO ₂ , Urea, Creatinine, PTT, INR, LFTs (ALP, AST, ALT, GGT, T. Bili), CK, random glucose now	CBC, Na ⁺ , K ⁺ , Cl ⁻ , CO ₂ , Urea, Creatinine, PTT, INR, LFTs (ALP, AST, ALT, GGT, T. Bili), CK, random glucose now	CBC, Na ⁺ , K ⁺ , Cl ⁻ , CO ₂ , Urea, Creatinine, PTT, INR, LFTs (ALP, AST, ALT, GGT, T. Bili), CK, fasting glucose within 2 weeks

Echocardiogram within 2 weeks
 Consider referral to Stroke physician

Arrange for fasting glucose and fasting lipid profile:
 Total Cholesterol, Triglycerides, HDL-C, LDL-C, TC/HDL-C Ratio

Consider Holter Monitor to rule-out Paroxysmal Atrial Fibrillation (PAF)

Etiology of Symptoms determined

- Consider carotid endarterectomy
- Initiate antithrombotic therapy (antiplatelet/ anticoagulant)
- Implement additional secondary prevention strategies (see next page)



MANAGEMENT OF TIA & ISCHEMIC STROKE

Risk Factor	Target	Intervention
Education	Recognize warning signs of Stroke	<ul style="list-style-type: none"> Educate patients to recognize the warning signs of Stroke and to call 911 immediately if symptoms occur. Major signs of TIA/ Stroke include but not restricted to SUDDEN (may be temporary): <ul style="list-style-type: none"> Focal weakness (with or without numbness); Speech impairment (aphasia, dysarthria); Vision impairment (visual field defect, loss of vision particularly in one eye, double vision); Loss of balance, dizziness especially with any of the above signs; and/ or, Headache (severe and unusual) characteristic of an hemorrhagic Stroke. Call 911 immediately if symptoms occur.
Smoking	Smoke-free	<p>See Smoking Cessation Guideline (page 29)</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<p>Target Weight: BMI 18.5 to 24.9 kg/m²</p> <p>Waist circumference: ≤88 cm (35") for women and ≤102 cm (40") for men</p> <p>Start with targeting weight loss of 5 – 10% of body weight.</p>	<ul style="list-style-type: none"> 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. See specific obesity/ overweight recommendations (page 43).
Alcohol Consumption	<2 drinks/ day	<ul style="list-style-type: none"> No alcohol to moderate <2 drinks/ day (<9/ week for women; <14/ week for men).
Hypertension	<140/90 mmHg or <130/80 mmHg if patient has Diabetes or CKD	<ul style="list-style-type: none"> Assess BP every 3 to 6 months. For patients who have had a Stroke, BP lowering is recommended even if BP <140/90 mmHg. Ensure patient knows his/ her BP values and targets. Initiate or maintain lifestyle modification (page 12). Add BP medication as needed to achieve targets.
Dyslipidemia	LDL-C <2.0 mmol/L or a 50% decrease in LDL-C; TC/ HDL-C Ratio <4.0	<ul style="list-style-type: none"> 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 (page 21). Ensure adequate titration to achieve targets. Start recommended dietary therapy (page 21). Promote daily physical activity and weight management. After obtaining required target, recheck annually.
Glycemic Control/ Diabetes	<p>If diabetic: HbA1c <7% (<6% if possible without hypoglycemia)</p>	<ul style="list-style-type: none"> Screen for Diabetes annually or as clinically indicated (page 65). If diabetic: <ul style="list-style-type: none"> Initiate lifestyle and pharmacotherapy to achieve near normal HbA1c. Initiate pharmacotherapy as per recommendations from Canadian Diabetes Association.²⁹
eGFR/ ACR	<p>If proteinuria or CKD: Target ACR <40</p>	<ul style="list-style-type: none"> Screen with eGFR/ ACR according to guideline (page 27). If target exceeded: <ul style="list-style-type: none"> ACEI or ARB to maximum tolerated dose and modify CV risk factors to target ACR <40; and, If ACR >60, refer to nephrology.
Antiplatelet	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.	<ul style="list-style-type: none"> Evidence suggests that treating patients with: (1) ASA + ER Dipyridamole; or (2) clopidogrel is more effective than treating with ASA for secondary prevention. Long-term combinations of ASA and clopidogrel are not recommended. If ASA alone is used, the usual maintenance dosage is 80 – 325 mg/day. For secondary prevention in Ischemic Stroke or TIA, antiplatelet therapy is used life-long.
Antithrombotic	Warfarin	<ul style="list-style-type: none"> Stroke patients with atrial fibrillation should be treated with warfarin at a target INR of 2.5, range 2.0 to 3.0 target INR of 3.0 for mechanical cardiac valves, range 2.5 to 3.5, if they are likely to be compliant with the required monitoring and are not at high-risk for bleeding complications.
Influenza Vaccination	Annually	<ul style="list-style-type: none"> Patients with CVD should have an influenza vaccination on an annual basis.
Referral	Stroke Physician Carotid Endarterectomy	<ul style="list-style-type: none"> Stroke physician referral may be helpful in confirming diagnosis and cause of the event in addition to comprehensive management. Patients with symptomatic carotid artery disease of 70–99% stenosis measured at angiography or by two concordant non-invasive imaging modalities should be offered carotid intervention (carotid endarterectomy) within 2 weeks of the incident Stroke or TIA.



COMMUNITY RESOURCES – TIA & ISCHEMIC STROKE

CHAMPLAIN REGIONAL STROKE CENTRE WEBSITE

Website: www.champlainstrokecentre.org

The Champlain Regional Stroke Centre 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 INFORMATION SHEETS

Ottawa: www.champlainstrokecentre.org/images/stories/community/stroke%20info%20cards_r5.1.pdf

Renfrew: www.champlainstrokecentre.org/images/stories/community/stroke%20info%20cards_renfrew_r1.pdf

Eastern Counties: www.champlainstrokecentre.org/images/stories/community/stroke%20info%20cards_eastcounties_r1.pdf

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: 613-798-5353, Option “0”

Fax: 613-761-5360

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: Individuals who are at high-risk for Stroke

Hours: By appointment

Language: English, French

Cost: N/A

Referral: Physician referral required.

To refer: Download referral form from:

www.champlainstrokecentre.org/images/stories/prevention/spc_consultation_july_07_final.pdf; 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.



Clinic/Program: Hawkesbury and District General Hospital Stroke Prevention Clinic

1111 Ghislain Street, Hawkesbury, ON
Tel: 613-632-1111 ext. 412 Fax: 613-636-6194
Contact: Annie Rioux

Description: The Hawkesbury Stroke Prevention Clinic facilitates rapid assessment and management for patients at high-risk for Stroke or who have had a suspected TIA or other Stroke symptom.

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

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.

Clinic/Program: Vivre Avec Un A.C.V.

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 survivant(e)s d'un accident cérébro-vasculaire (Stroke) et leurs proches. C'est un programme de huit rencontres où nous discutons d'un thème différent avec un professionnel dans ce domaine.

Appropriate for: Patients who have had a suspected TIA or other Stroke symptom and family members.

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

Language: French

Cost: N/A

Referral: Self-referral

NOTES

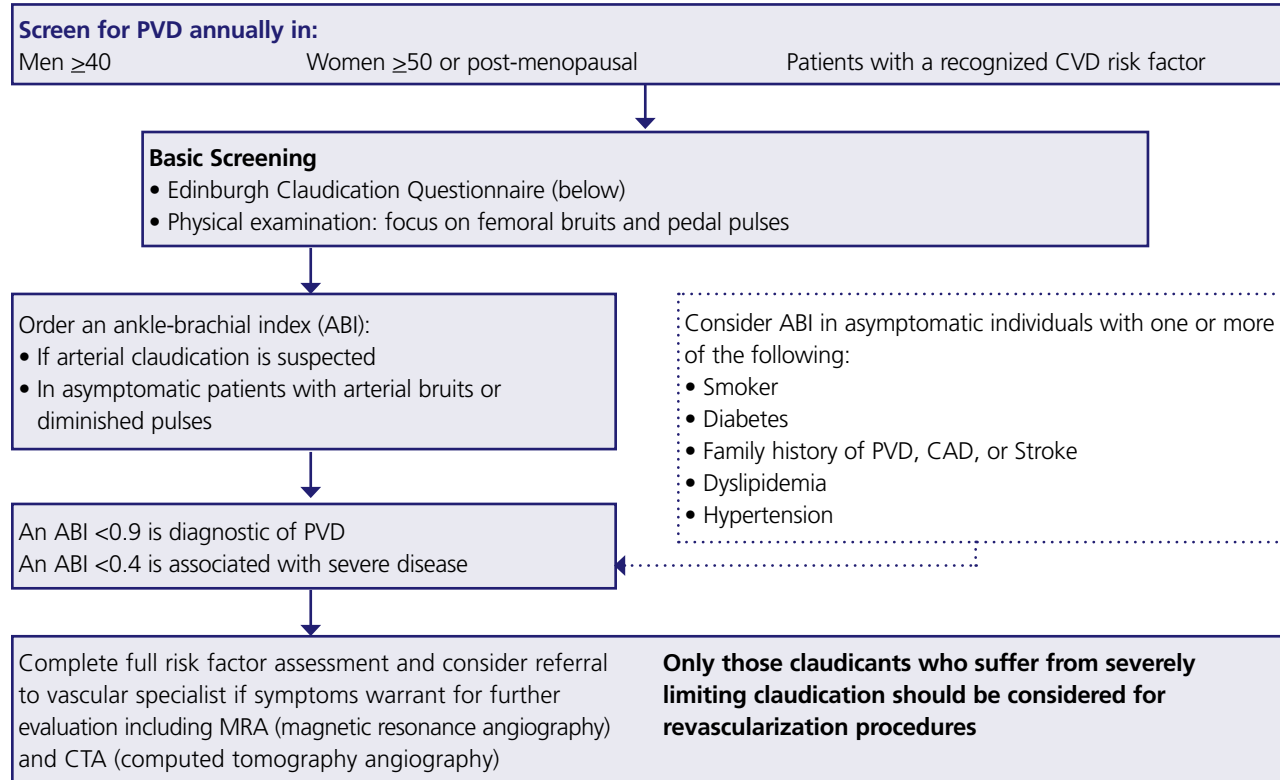
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CORONARY ARTERY DISEASE & PERIPHERAL VASCULAR DISEASE

SCREENING FOR PERIPHERAL VASCULAR DISEASE (PVD)

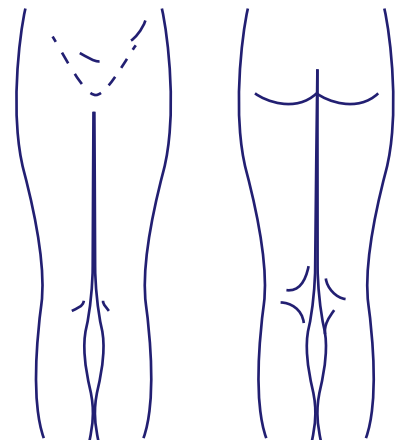
Source: Abramson B, Huckell V et. al. Canadian Cardiovascular Society Consensus Conference: Peripheral arterial disease. Can J Cardiol. 2005; 21(12): 997-1006.²⁸



The Edinburgh Claudication Questionnaire

* A positive questionnaire diagnosis of claudication is made only if the "correct" answer is given to all questions.

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





MANAGEMENT OF CORONARY ARTERY DISEASE & PERIPHERAL VASCULAR DISEASE

Source: Adapted from Smith S, Allan J, Blair S et al. AHA/ACC Guidelines for Secondary Prevention for Patients with Coronary and Other Atherosclerotic Vascular Disease: 2006 Update: Endorsed by the National, Heart, Lung, Blood Institute. *Circulation*. 2006; 113:2363-2372.²⁷

Abramson B, Huckell V et. al. Canadian Cardiovascular Society Consensus Conference: Peripheral arterial disease. *Can J Cardiol*. 2005; 21(12): 997-1006.²⁸

Risk Factor	Target	Intervention
Smoking	Smoke-free	<p>See Smoking Cessation Guideline (page 29)</p> <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<p>Target Weight BMI 18.5 to 24.9 kg/m²</p> <p>Waist circumference: ≤88 cm (35") for women and ≤102 cm (40") for men</p> <p><i>Start with targeting weight loss of 5 – 10% of body weight.</i></p>	<ul style="list-style-type: none"> • 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. • See specific obesity/ overweight recommendations (page 43).
Hypertension	<p><140/90 mmHg; or <130/80 mmHg if patient has Diabetes, CKD</p>	<ul style="list-style-type: none"> • Assess BP every 3 to 6 months. • Ensure patient knows his/ her BP values and targets. • Initiate or maintain lifestyle modification (page 12). • Add BP medication as needed to achieve targets.
Dyslipidemia	<p>LDL-C <2.0 mmol/L or a 50% decrease in LDL-C; TC/HDL-C Ratio <4.0</p>	<ul style="list-style-type: none"> • 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 (page 21). • Ensure adequate titration to achieve targets. • Start recommended dietary therapy (page 21). • Promote daily physical activity and weight management. • After obtaining required target, recheck annually.
Glycemic Control/ Diabetes	<p>If diabetic: HbA1c <7% (<6% if possible without hypoglycemia)</p>	<ul style="list-style-type: none"> • Screen for Diabetes annually or as clinically indicated (page 65). • If diabetic: <ul style="list-style-type: none"> • Initiate lifestyle and pharmacotherapy to achieve near normal HbA1c. • Initiate pharmacotherapy as per recommendations from Canadian Diabetes Association.²⁹
eGFR/ ACR	<p>If proteinuria or CKD: Target ACR <40</p>	<ul style="list-style-type: none"> • Screen with eGFR/ ACR according to guideline (page 27). • If target exceeded: <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Start ASA and continue indefinitely unless contraindicated. • Start and continue Clopidogrel 75 mg/d in combination with ASA for 12 months in patients with acute coronary syndrome or stent placement.
ACE Inhibitors		<ul style="list-style-type: none"> • Start and continue ACE inhibitors indefinitely in all patients with: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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		<ul style="list-style-type: none"> • 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.
Influenza Vaccination	Annually	<ul style="list-style-type: none"> • 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)**

Cardiac Rehabilitation Programs
40 Ruskin Street, Ottawa, ON K1Y 4W7
Tel: 613-761-4572 Fax: 613-761-5336

Description: **(1) On-Site Supervised Program**

- 1- to 3-month program
- Supervised on-site, twice-weekly exercise sessions (1 hour/ session)
- Medical assessment by cardiac rehabilitation physician
- Nutrition workshops

Referral to services such as:

- Nutritional counselling
- Stress management
- Smoking cessation
- Vocational counselling
- Psychological counselling
- Social work counselling

(2) Case-Managed Home Program

Provides flexibility for those unable to participate in hospital-based program

- 3-month program
- Tailored program focused on your patients personal heart health goals
- 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 after 3 and 12 months

(3) Brief Program

- Coronary risk factor assessment
- Nutrition education sessions
- Exercise evaluation and tailored home exercise program - **no supervised exercise sessions**
- Total of 4 sessions at UOHI
- Follow-up evaluation scheduled after 3 and 12 months

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: Download referral form: www.ottawaheart.ca/UOHI/doc/FrancoForme_Referral_Eng.pdf; complete form and fax to UOHI; and inform patient that UOHI will contact them directly.

**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: **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.

To refer: 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 program
 - Supervised on-site, twice-weekly exercise sessions
 - Education sessions
 - Bilingual staff

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

Clinic/Program: Cornwall Community Hospital Cardio-Respiratory 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: For patients with Chronic Obstructive Pulmonary Disease or heart failure

Hours: Vary

Language: English, French

Cost: N/A

Referral: Contact clinic for information

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 Debruyne, 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 Tues and Thurs, 9:00 a.m. to 5:30 p.m.
Assessment day is Wed, 9:00 a.m. to 2:30 p.m.

Language: English

Cost: N/A but parking costs \$5.00/day

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**

Coordinating Site: University of Ottawa Heart Institute (UOHI)
40 Ruskin Street, Ottawa, ON K1Y 4W7
Tel: 613-761-5336 Fax: 613-761-4567
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; all other contacts delivered via telephone by appointment.

Language: French only

Cost: N/A

Referral: Physician referral required.
Download referral form: www.ottawaheart.ca/UOHI/doc/FrancoForme_Referral_Fr.pdf

Clinic/Program: **Heart Wise Exercise**

Tel: 613-798-5555 ext. 18691
Email: HeartWise@ottawaheart.ca

Description: Exercise programs in the Ottawa community at public recreation facilities. Heart Wise exercise programs meet criteria set by the University of Ottawa Heart Institute (UOHI) and community partners ensuring the programs are safe for people with heart disease.
For locations, visit the UOHI website: www.ottawaheart.ca/UOHI/doc/HeartWise.pdf

Appropriate for: People with heart disease provided they have approval from their doctor.

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**
Heart Health Education Centre (HHEC)
University of Ottawa Heart Institute
40 Ruskin Street, Ottawa, ON K1Y 4W7
Tel: 613-761-4753 or 1-866-399-HHEC (4432)
Web: www.ottawaheart.ca/HHEC

Description: **ABCs to Heart Healthy Eating:** Develop the skills for heart healthy eating to reduce or control blood cholesterol and improve artery health. Get the facts on fat, cholesterol, dietary fibre and salt.
Heart Healthy Shopping: Learn the tools to better understand food labels, develop heart healthy shopping lists, and plan meals.
Nutrition Tips for Weight Management: Learn to set realistic goals for healthy weight management. Acquire the skills to develop balanced meals, proper portion sizes, and techniques for weight loss and maintenance.
Hot Topics in Heart Health for Nutrition: Expand the knowledge you got in the ABCs workshop! An update on various topics related to heart disease such as Mediterranean diet, antioxidants, omega-3 fats, glycemic index, and dietary supplements.
Eating Well with Diabetes: Get the lowdown on meal planning, carbohydrates, sweeteners and glycemic index. For people wishing to control or prevent Diabetes.
Bien s'alimenter de A à Z: A 2-hour session, only offered in French, which summarizes the three first nutrition workshops: 1) ABCs to Heart Healthy Eating; 2) Heart Healthy Shopping; and 3) Nutrition Tips for Weight Management.

Appropriate for: Patients, families, or members of the public who want to learn more about healthy nutrition

Hours: Call HHEC for schedule

Language: English, French

Cost: N/A

Referral: Telephone registration required

Clinic/Program: **Cœur À Cœur**
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

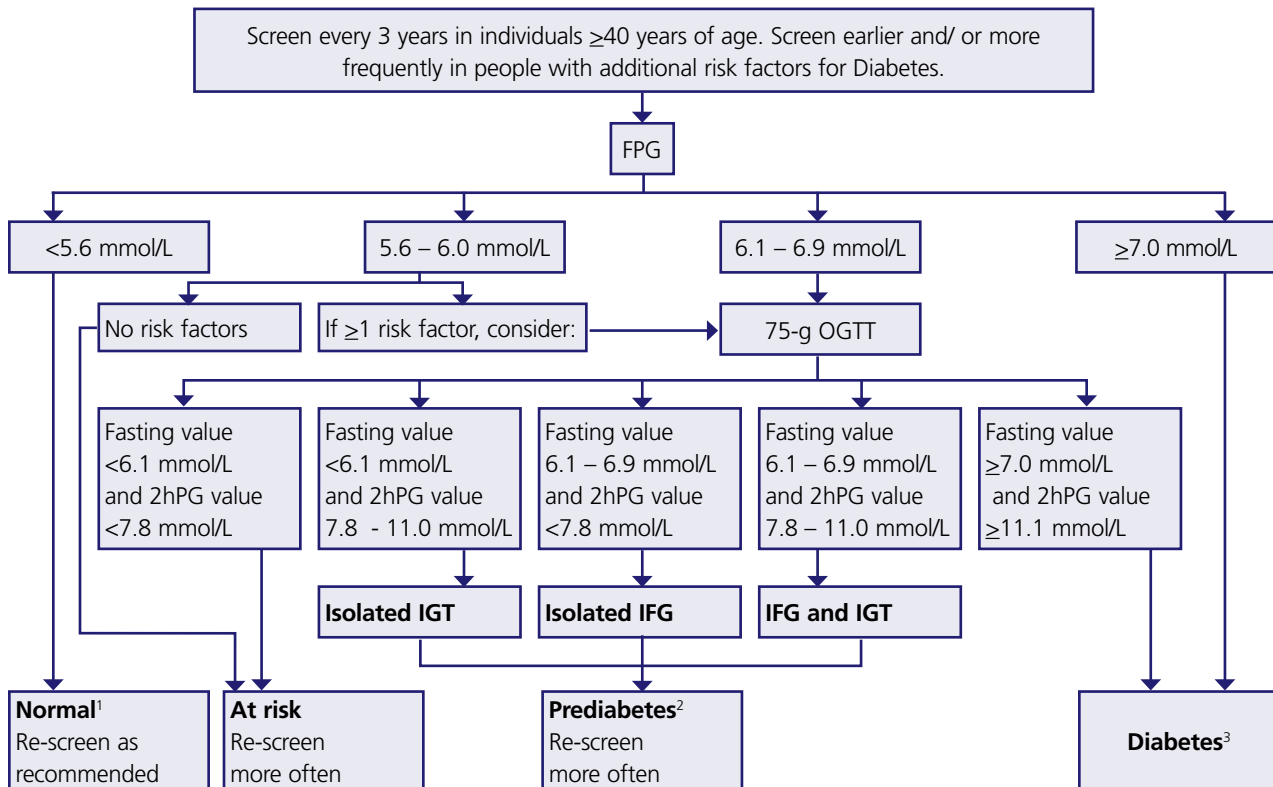
Referral: Self-referral



DIABETES MELLITUS

Source: Adapted from Canadian Diabetes Association Clinical Practice Guideline Expert Committee. Canadian Diabetes Association 2008 clinical practice guidelines for the prevention and management of Diabetes in Canada. Can J Diabetes 2008;32(supp 1):S1-S201.²⁹

DIAGNOSIS OF DIABETES



Management of Prediabetes

- 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.
- In individuals with IGT and/ or IFG and no known CVD, consider a thiazolidinedione.

¹ If, despite a normal fasting value, an OGTT is subsequently performed and the 2hPG value is 7.8 – 11.0 mmol/L, a diagnosis of isolated IGT is made.

² Prediabetes: individuals with isolated IGT, isolated IFG, or both IGT and IFG are considered to have Prediabetes.

³ A confirmatory laboratory glucose test (either an FPG, a casual PG, or a 2hPG in a 75-g OGTT) must be done on another day in all cases in the absence of unequivocal hyperglycemia accompanied by acute metabolic decompensation.

2hPG = 2 hour plasma glucose

CVD = cardiovascular disease

FPG = fasting plasma glucose

IFG = impaired fasting glucose

IGT = impaired glucose tolerance

OGTT = oral glucose tolerance test

PG = plasma glucose

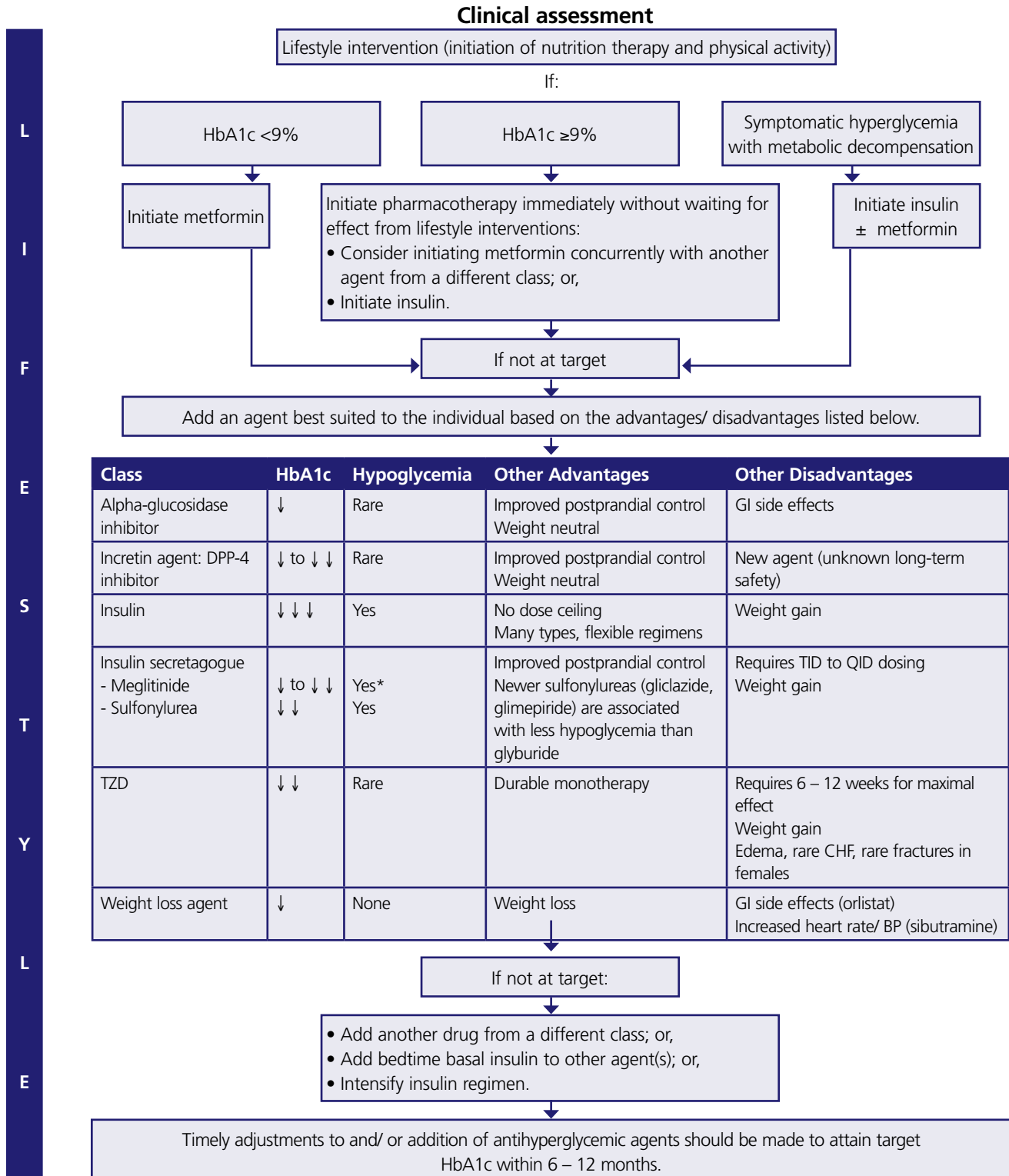


MANAGEMENT OF DIABETES

RISK FACTOR	TARGET	PRACTICE RECOMMENDATIONS
Self-management education	All individuals referred to Diabetes education programs that are tailored to enhance self-care practices	<ul style="list-style-type: none"> Refer individuals with Diabetes to self-management, diabetic education programs at diagnosis and as required – see Community Resources (page 69). Refer all newly diagnosed diabetics to nutrition counselling by a registered dietitian.
Smoking	Smoke-free	<ul style="list-style-type: none"> See Smoking Cessation Guideline (page 29). 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	<ul style="list-style-type: none"> 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	<p>BMI: 18.5 – 24.9 kg/m²</p> <p>Waist circumference: Men <102 cm (40"); Women <88 cm (35")</p> <p>Start with targeting weight loss of 5 – 10% of body weight.</p>	<ul style="list-style-type: none"> 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. See specific obesity/ overweight recommendations (page 43).
Hypertension	<130/80 mmHg	<ul style="list-style-type: none"> Assess BP every 3 to 6 months. Ensure patient knows his/ her BP values and targets. Initiate or maintain lifestyle modification (page 12). Add BP medication as needed to achieve targets (page 12).
Dyslipidemia	LDL-C <2 mmol/L or a 50% decrease in LDL-C; TC/ HDL-C ratio <4	<ul style="list-style-type: none"> 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 (page 21). Ensure adequate titration to achieve targets. Start recommended dietary therapy (page 21). Promote daily physical activity and weight management. After obtaining required target, recheck annually.
Glycemic Control	<p>HbA1c ≤7.0%</p> <p>Consider targeting HbA1c ≤6.5% to lower risk of nephropathy (if possible without hypoglycemia)</p>	<ul style="list-style-type: none"> To achieve target, aim for: <ul style="list-style-type: none"> 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 68): <ul style="list-style-type: none"> 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.
Nephropathy	<p>ACR: Men: <2.0 mg/mmol Women: <2.8 mg/mmol</p> <p>eGFR: >60 ml/min/1.73 m²</p>	<ul style="list-style-type: none"> Screen at diagnosis and annually with ACR and eGFR; repeat if targets exceeded. If persistent albuminuria (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. <ul style="list-style-type: none"> Monitor ACR and eGFR at least every 6 months. Refer to Chronic Kidney Disease (CKD) recommendations (page 27).
Antiplatelet	ASA 81 – 325 mg daily in people with stable CVD	<ul style="list-style-type: none"> Prescribe low dose ASA therapy in individuals with stable CVD. Clopidogrel 75 mg may be considered if unable to tolerate ASA. The use of antiplatelet therapy for primary prevention of CVD in high risk individuals should be considered on an individual basis.
ACE Inhibitors/ ARB	In individuals considered at high risk for CVD	<ul style="list-style-type: none"> Individuals with Diabetes at high risk for CV events should receive an ACE inhibitor or ARB at doses that have demonstrated vascular protection.
Influenza Vaccinations	Annually	<ul style="list-style-type: none"> Prescribe influenza vaccination on an annual basis. Pneumococcal vaccination once in a lifetime.
Neuropathy	Screen using 10 g monofilament or 128-Hz tuning fork	<ul style="list-style-type: none"> Screen peripheral neuropathy by assessing loss of sensitivity to the 10 g monofilament or loss of sensitivity to vibration at the dorsum of the great toe. Intensify glycemic control to prevent the onset and progression of neuropathy.
Retinopathy	Eye Examination	<ul style="list-style-type: none"> Refer to expert professional for screening and evaluation for diabetic retinopathy at least every 1 – 2 years. Intensify glycemic, blood pressure, and lipid control if abnormal.
Foot Care	Foot Examination	<ul style="list-style-type: none"> Annually or more often if clinically indicated. Instruct all patients on proper foot care.
Referral	Specialty Clinic	<ul style="list-style-type: none"> Refer to specialty clinic when the management of the patient exceeds the comfort level of the family physician.



MANAGEMENT OF HYPERGLYCEMIA IN TYPE 2 DIABETES



HbA1c = glycated hemoglobin
BP = blood pressure
CHF = congestive heart failure
* Less hypoglycemia in the context of missed meals

DPP-4 = dipeptidyl peptidase-4
GI = gastrointestinal
TZD = thiazolidinedione

↓ = <1.0% decrease in HbA1c
↓↓ = 1.0–2.0% decrease in HbA1c
↓↓↓ = >2.0% decrease in HbA1c



ANTIHYPERGLYCEMIC AGENTS FOR USE IN TYPE 2 DIABETES

Class	Brand Name	Expected ↓ in HbA1c with Monotherapy	Hypoglycemia	Other Therapeutic Considerations
Alpha-glucosidase inhibitor	Acarbose (Glucobay)	↓	Negligible risk as monotherapy	<ul style="list-style-type: none"> 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 Sitagliptin (Januvia)	↓ to ↓↓	Negligible risk as monotherapy	<ul style="list-style-type: none"> Weight neutral. Improved postprandial control. Newer agent with unknown long-term safety.
Insulin	Rapid-acting analogues: <ul style="list-style-type: none"> Aspart (NovoRapid) Glulisine (Apidra) Lispro (Humalog) Short-acting: <ul style="list-style-type: none"> Regular (Humulin-R, Novolin geToronto) Intermediate-acting: <ul style="list-style-type: none"> NPH (Humulin-N, Novolin ge NPH) Long-acting basal analogues: <ul style="list-style-type: none"> Detemir (Levemir) Glargine (Lantus) Premixed: <ul style="list-style-type: none"> Premixed Regular-NPH (Humulin 30/70) Novolin ge 30/70, 40/60, 50/50 Biphasic insulin aspart (NovoMix 30) Insulin lispro/ lispro protamine (Humalog Mix25, Mix50) 	Depends on regimen, but up to ↓ ↓ ↓ ↓	Significant risk	<ul style="list-style-type: none"> Potentially greatest HbA1c reduction and no maximal dose. Numerous formulations and delivery systems (including subcutaneous-injectable) allow for regimen flexibility. Hypoglycemia risk highest with regular and NPH insulin. 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.
Insulin secretagogues	Sulfonylureas: <ol style="list-style-type: none"> Gliclazide (Diamicon, Diamicon MR, generic) Glimepiride (Amaryl) Glyburide (Diabeta, Euglucon, generic) • NB: chlorpropamide and tolbutamide are still available in Canada but rarely used Meglitinides: <ul style="list-style-type: none"> Nateglinide (Starlix) Repaglinide (GlucoNorm) 	↓ ↓ ↓ ↓ ↓	<ol style="list-style-type: none"> Minimal/moderate risk Moderate risk Significant risk Minimal/moderate risk	<ul style="list-style-type: none"> Relatively rapid BG-lowering response. All insulin secretagogues reduce glycemia similarly (except nateglinide, which is less effective). Postprandial glycemia is especially reduced by nateglinide and repaglinide. Hypoglycemia and weight gain are especially common with glyburide. Consider using other class(es) 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 and glimepiride is associated with less hypoglycemia than glyburide. Nateglinide and repaglinide are associated with less hypoglycemia in the context of missed meals.
Metformin	Glucophage, Glumetza, generic	↓ ↓	Negligible risk as monotherapy	<ul style="list-style-type: none"> 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) Rosiglitazone (Avandia)	↓ ↓	Negligible risk as monotherapy	<ul style="list-style-type: none"> Longer duration of glycemic control with monotherapy compared to metformin or glyburide. Mild BP lowering. Between 6 and 12 weeks required to achieve full glycemic 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) Sibutramine (Meridia)	↓	None	<ul style="list-style-type: none"> Promotes weight loss. 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) Avandaryl (glimepiride + rosiglitazone)	↓ ↓ ↓ ↓ ↓ ↓	Negligible risk as monotherapy Moderate risk	<ul style="list-style-type: none"> See metformin, TZDs, and sulfonylureas.



COMMUNITY RESOURCES – DIABETES

CITY OF OTTAWA:

Clinic/Program: **Foustanellas Endocrine and Diabetes Centre**

The Ottawa Hospital
Riverside Campus, 4th Floor, 1967 Riverside Drive, Ottawa, ON
Tel: 613-738-8400 Ext. 88333 Fax: 613-738-8261
Web: www.ottawahospital.on.ca/patient/visit/clinics/Diabetes-e.asp

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
- Carbohydrate counting
- Multiple daily injections
- Living with insulin

Appropriate for: Patients with:

- Type 2 Diabetes and/ or multiple meds and/ or chronic multi-system complication
- Type 1 Diabetes

Hours: Mon - Fri: 8 a.m. to 5 p.m.,
Classes Wed & Thurs every other week

Language: English, French

Cost: N/A

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

Clinic/Program: **High Risk Diabetes in Pregnancy**

The Ottawa Hospital, Civic Campus
1053 Carling Avenue, Ottawa, ON K1Y 4E9
Tel: 613-761-4401 Fax: 613-761-5141
or

Special Pregnancy Unit (SPU)

The Ottawa Hospital, General Campus
501 Smyth Road, Ottawa, ON K1H 8L6
Tel: 613-737-8552 Fax: 613-739-6292

Description: Patients will be seen by an endocrinologist or internist, a dietitian, and a Diabetes nurse specialist.

Appropriate for: Patients with Gestational Diabetes or women with Type 1 and Type 2 Diabetes planning a pregnancy or who are pregnant.

Hours: Tues (Civic) / Fri (General)

Language: English, French

Cost: N/A

Referral: Physician referral required.
To refer: Fax referral, including antenatal history, most recent blood work, and ultrasound report if applicable. Clinic will contact referring physician's office with appointment time and date.

**Clinic/Program:** **Community Diabetes Education Program**

Main Office: Centertown Community Health Centre
420 Cooper St., Ottawa, ON
Tel: 613-233-6655 Fax: 613-233-6713
Web: www.centretownchc.org

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

Language: English, French, Arabic, Hindi, Others (please indicate on referral)

Cost: N/A

Referral: Physician referral required.

To refer: Send fax; include most recent test results and purpose of referral; coordinator will contact patient directly. Patients can also contact program and self-refer.

OTTAWA-EAST:

Clinic/Program: **Diabetes Clinic Hôpital Montfort**

745B Montreal Rd., Suite 102, Ottawa, ON K1K 0T2
Tel: 613-746-4621 ext. 3130 Fax: 613-748-4958
Contact: Joanne Champagne

Description: Multi-disciplinary team: dietitian, nurse practitioner, kinesiologist, Diabetes management.

Appropriate for: Patients with Type 1 or Type 2 Diabetes

Hours: Mon to Fri: 7:30 a.m. - 3:30 p.m.

Language: French, English

Cost: N/A

Referral: Physician referral required.

To refer: 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**

299 Montreal Rd., Ottawa, ON
Tel: 613-748-0657 ext. 212 Fax: 613-748-9364
Web: www.wabano.com
Contact: Dian Day, Diabetes Program Coordinator

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: Aboriginal peoples with and without 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: Accepts:

- Physician referrals
- Other health care professional referrals
- Self-referrals

Clinic/Program: **Diabetes Education Team**

The Eastern Ontario Community Family Health Team
2339 Ogilvie Road, Ottawa, and 3059 St. Joseph Boulevard, Orleans
Tel: 613-590-1407

Description: Individual and group education sessions for Diabetes and Pre-Diabetes clients in the eastern Ottawa region.

Appropriate for: Patients with Diabetes or Pre-Diabetes

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

Language: English, French

Cost: N/A

Referral: Accepts:

- Physician referrals
- Other health care professional referrals
- Self-referrals

OTTAWA-WEST:

Clinic/Program: **Diabetes Education Program/ Clinic**

Queensway-Carleton Hospital
3045 Baseline Road, Ottawa, ON K2H 8P4
Tel: 613-721-2000 ext. 3763 Fax: 613-721-4787
Contact: Sharon Rouatt

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 Type 1 or Type 2 Diabetes

Hours: 2-day program offered on Tues and Wed, Clinic offered Wed and Thurs

Language: English

Cost: N/A

Referral: Physician referral required.
To refer: 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:** **Almonte General Hospital**

75 Spring Street, Almonte, ON KOA 1A0

Tel: 613-256-2500

Contact: Janet Hogan x2245

Email: jhogan@agh-fvm.com

Description: Individual counselling provided on a one-on-one basis. Patients can also be referred to the Rideau Valley Diabetes Services (listed under Leeds, Lanark & Grenville)**Appropriate for:** Persons with Pre-Diabetes, Type 1 and Type 2 Diabetes**Hours:** By appointment**Language:** English**Cost:** N/A**Referral:** Physician referral required

Clinic/Program: **Arnprior and District Memorial Hospital**

350 John Street North, Arnprior, ON K7S 2P6

Tel: 613-623-3166 ext. 247

Contact: Maureen Miller

Email: maureen.miller@arnpriorhospital.com

Description: Patients can participate in the group sessions and/ or ask to be seen on an individual basis.
Group Education Sessions: 1-day session, then 1/2 day follow-up session 3 months later.
Individual Counselling: A dietitian and nurse are available to meet one-on-one with patients, as needed.**Appropriate for:** Persons with Pre-Diabetes, Type 1 and Type 2 Diabetes (Note: there is no counselling on insulin pumps)**Hours:** 1-day session: 3rd Wed of every month, 9 a.m. to 3 p.m.; 1/2 day session: 9 a.m. to 11:30 a.m.**Language:** English**Cost:** N/A**Referral:** Physician referral required

Clinic/Program: **Carleton Place and District Memorial Hospital**

211 Lake Avenue East, Carleton Place, ON K7C 1J4

Tel: 613-257-2200 ext. 817

Contact: Deb Quintal

Email: dquintal@carletonplacehosp.com

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 Type 2 Diabetes**Hours:** See program description**Language:** English**Cost:** N/A**Referral:** Physician referral required



EASTERN COUNTIES:

Clinic/Program: **Diabetes Clinic**

Hawkesbury & District General Hospital
1111 Ghislain Street, Hawksbury, ON
Tel: 613-632-1111 ext. 482 Fax: 613-636-6194
Contact: Suzanne Levac

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.

Appropriate for: Persons with glucose intolerance, Type 1 or Type 2 Diabetes, Gestational Diabetes

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

Language: English, French

Cost: N/A

Referral: Accepts:

- Physician referrals
- Other health care professional referrals
- Self-referrals

Clinic/Program: **Diabetic Clinic**

Winchester District Memorial Hospital (WDMH)
566 Louise Street, Winchester, ON
Tel: 613-774-2420 ext. 6764 or 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: Persons with Diabetes

Hours: Call for schedule

Language: English

Cost: N/A

Referral: Accepts:

- Physician referrals
- Other health care professional referrals
- Self-referrals

**Clinic/Program: Programme d'éducation au diabète**

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: 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

Cost: N/A

Referral: Self-referral or physician referral

Clinic/Program: Diabetes Education Centre

Cornwall Community Hospital
 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: Pre-diabetic with abnormal test results
 Type 2 diabetic

Hours: Initial workshop is offered twice per month

Language: English (mainly), French

Cost: N/A

Referral: Self-referral or physician referral

Clinic/Program: Glengarry Memorial Hospital (GMH)

20260 County Road 43, Alexandria, ON K0C 1A0
 Tel: 613-525-2222 ext 4169
 Contact: Angela Samson
 Email: asamson@hgmh.on.ca

Description: Available in group settings or on an individual basis.

Appropriate for: People with Type 1 or Type 2 Diabetes, IGT, Pre-Diabetes, Gestational Diabetes

Hours: Registered Nurse (RN) - Every Tues morning: 8 a.m. to noon
 Registered Dietitian (RD) - Every Tues: 9 a.m. to 5 p.m.

Language: English, French

Cost: N/A for RN and RD. Referrals for weight management through the dietitian = \$25.00 per session.

Referral: Physician referral required. Hospital policy is to accept clients who have been referred from a family physician within the community who has hospital privileges directly at the GMH.



RENFREW COUNTY & DISTRICT:

Clinic/Program: **Diabetes Clinic**

St. Francis Memorial Hospital
7 St. Francis Memorial Drive, Barry's Bay, ON
Tel: 613-756-3045 Ext. 240 Fax: 613-756-7168
Contact: Janet Lynch

Description: Group and individual sessions. Dietitian and pharmacist provide the information. Individuals are assisted to develop the best plan of care for their Diabetes, and to strive to manage their disease with the focus on feeling well and prevention of complications.

Appropriate for: Persons with Diabetes, their family and caregivers

Hours: Education classes are held monthly. Follow-up visits: Thurs and Fri from 7:00 a.m. - 4:00 p.m.

Language: English

Cost: N/A

Referral: Accepts:

- Physician referrals
- Other health care professional referrals
- Self-referrals

Clinic/Program: **Renfrew Victoria Hospital**

499 Raglan Street North Renfrew, ON K7V 1P6
Tel: 613-432-4851 ext. 206
Contact: Jessica Fitzgerald
Email: jfitzgerald@rcdhu.com

Description: Taught by a Registered Dietitian and a Registered Nurse. The program consists of three 2-hour group classes, plus an individual session with both the dietitian and the nurse, plus two group follow-up classes, one at three months and the other at nine months later.

Appropriate for: People with Pre-Diabetes, Type 1 and Type 2 Diabetes, family members, and caregivers

Hours: Group classes begin the first Wed of each month from 9 a.m. until 11 a.m. and continue for the next two Weds at the same times.

Language: English

Cost: N/A

Referral: Self-referrals and physician referrals are accepted. Everyone is welcome but registration is required for the classes. Accepts self-referrals and physician referrals. Registration required for classes.

Clinic/Program: **Pembroke Regional Hospital**

705 Mackay Street, Pembroke, ON
Tel: 613-732-2811 ext. 6205
Contact: Judy Hill Email: jhill@pemreghos.org

Description: **Survival Skills:** Group classes given every 2 weeks for patients with Type 2 Diabetes. Group classes run 3 out of 4 Thursdays per month, from 3 to 4:30 p.m. Patients attend one group session and are followed up through individual meetings afterwards, as needed. Patients with Type 1 Diabetes are booked into individualized meetings, as needed.
Outreach to Community: Different sessions are given on a weekly basis (normally one session per week – contact Judy Hill for more information on dates, times, and events). Sessions include special presentations, grocery shopping tours, etc.

Appropriate for: People with Pre-Diabetes, Diabetes, family members, and caregivers

Hours: Monday to Friday

Language: English, French

Cost: N/A

Referral: None required



LEEDS, LANARK & GRENVILLE

Clinic/Program: **Kemptville District Hospital**

2675 Concession Rd. Kemptville, ON K0G 1J0
 Tel: 613-258-6133 ext. 216
 Contact: Alia Khudhair

Description: See website for more info: www.kdh.on.ca/serv_7_e.html

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.

Special Topics: Coming March 2008 to the Diabetes Clinic: an evening program focused on a topic of interest, chosen by the clients of the clinic. Presentations provided by a Registered Dietitian, Registered Nurse or guest speakers, depending on the topic. Although the focus of these topics will be aimed at those with Diabetes, community members who are not diagnosed with Diabetes but share a common interest in the topic are welcome.

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: Tues, Wed, and every other Thurs, from 8 a.m. to 4 p.m.

Language: English

Cost: N/A

Referral: Physician referral required for the Insulin Initiation program.

Clinic/Program: **North Lanark County Community Health Centre**

207 Robertson Drive, Lanark, ON K0G 1K0
 Tel: 613-259-2182 ext 441
 Contact: Heather Loubier
 Email: hloubier@northlanarkchc.on.ca OR Erika Carson

Description: **"Diabetes and You"** Education/ Support Group: Sessions take place monthly and are led by a dietitian and guest speakers.

Appropriate for: People with Pre-Diabetes, Diabetes (primarily Type 2), family members, and caregivers

Hours: Every 4th Monday of the month, 2 p.m. to 4 p.m.

Language: English

Cost: N/A

Referral: None required



Clinic/Program: Rideau Valley Diabetes Services

Director: Maureen McIntyre
2 Gould Street, Unit 18, Smiths Falls, ON K7A 5C7
Tel: 613-284-2558 or 1-877-321-4500
Fax: 613-284-2591
Email: diabetes.rvds@mdchc.on.ca
Website: www.rvds.ca

Description: Provides accessible services to assist people affected by 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 education programs, individual counselling, multi-disciplinary clinics, support groups, and other events such as grocery store tours, conferences, and training for health care professionals.

Appropriate for: Individuals who are affected by Diabetes.

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

Language: English

Cost: N/A

Referral: Registration required for education or counselling programs. Call or visit website for program information. Physician referral required for the Insulin Initiation Program.

Clinic/Program: Diabetes Clinic, Smiths Falls

Medical Lead: Dr. J.R. Conway
218 Percy Street, Smiths Falls, ON K7A 4W8
Tel: 613-284-0145 or 1-800-717-0145
Fax: 613-283-9020
Email: diabetes@diabetesclinic.ca
Website: www.diabetesclinic.ca

Description: We are an independent Medical Clinic specializing in the treatment of Diabetes Mellitus. We treat Diabetes Mellitus according to the treatment guidelines of the Canadian Diabetes Association.

The website is dedicated to:

- Patients in their wish to further their understanding of Diabetes and find supportive material; and,
- Health care professionals, for specialized information, educational materials and tools to enhance care, particularly in rural areas where specialist support and educational opportunities are limited.

Appropriate for: Individuals affected by Diabetes.

Hours: Mon to Fri: 7:30 a.m. to 6:00 p.m. (extended hours on Tuesdays)

Language: English, French

Cost: N/A

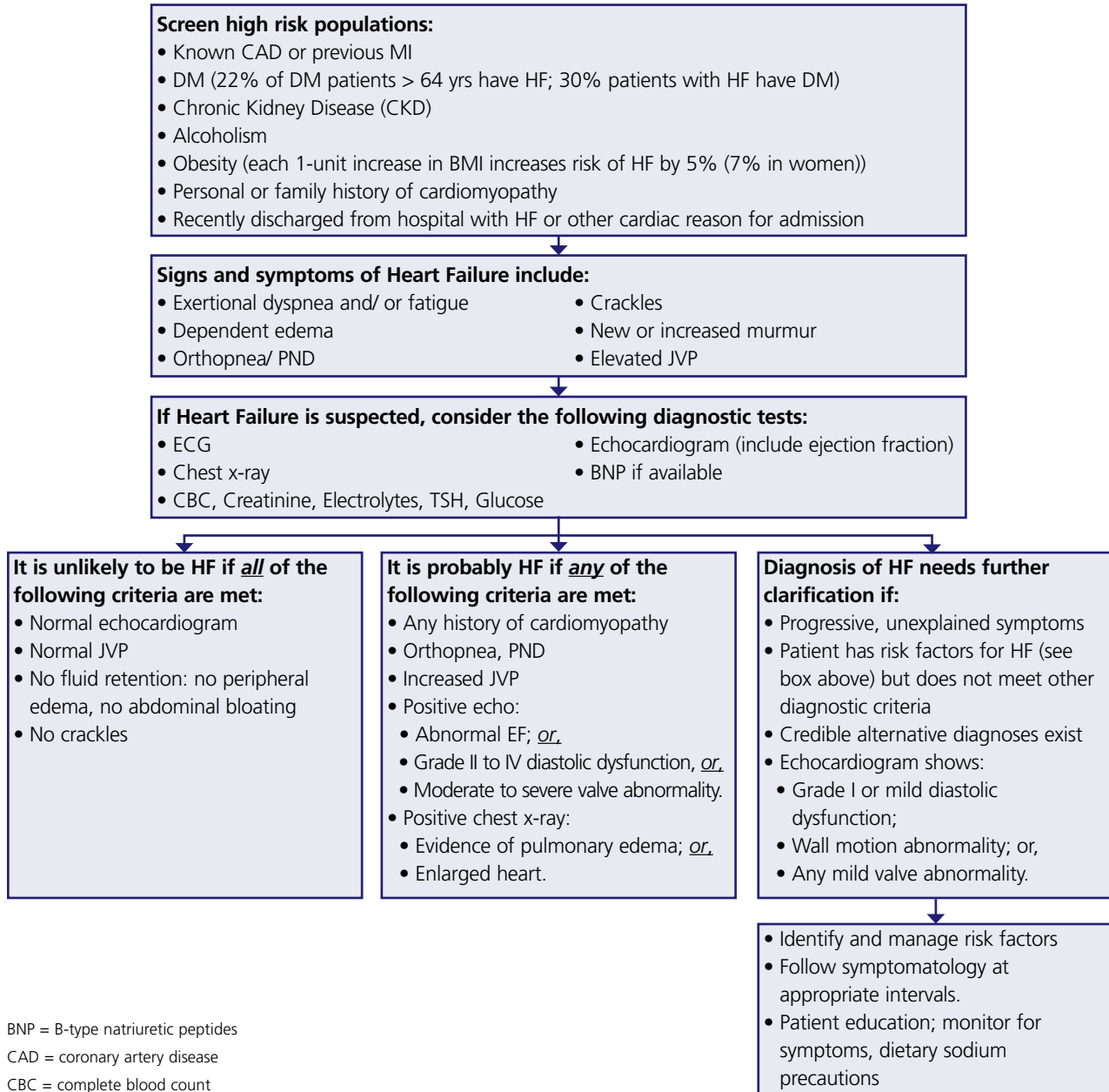
Referral: Physician referral required. Call to register.



HEART FAILURE

Source: Adapted from Arnold JMO, Liu P, Demers C, et al. Canadian Cardiovascular Society Consensus conference recommendations on heart failure 2006: Diagnosis and management. Can J Cardiol 2006;22(1):23-45.³⁵

DIAGNOSIS OF HEART FAILURE



BNP = B-type natriuretic peptides
 CAD = coronary artery disease
 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

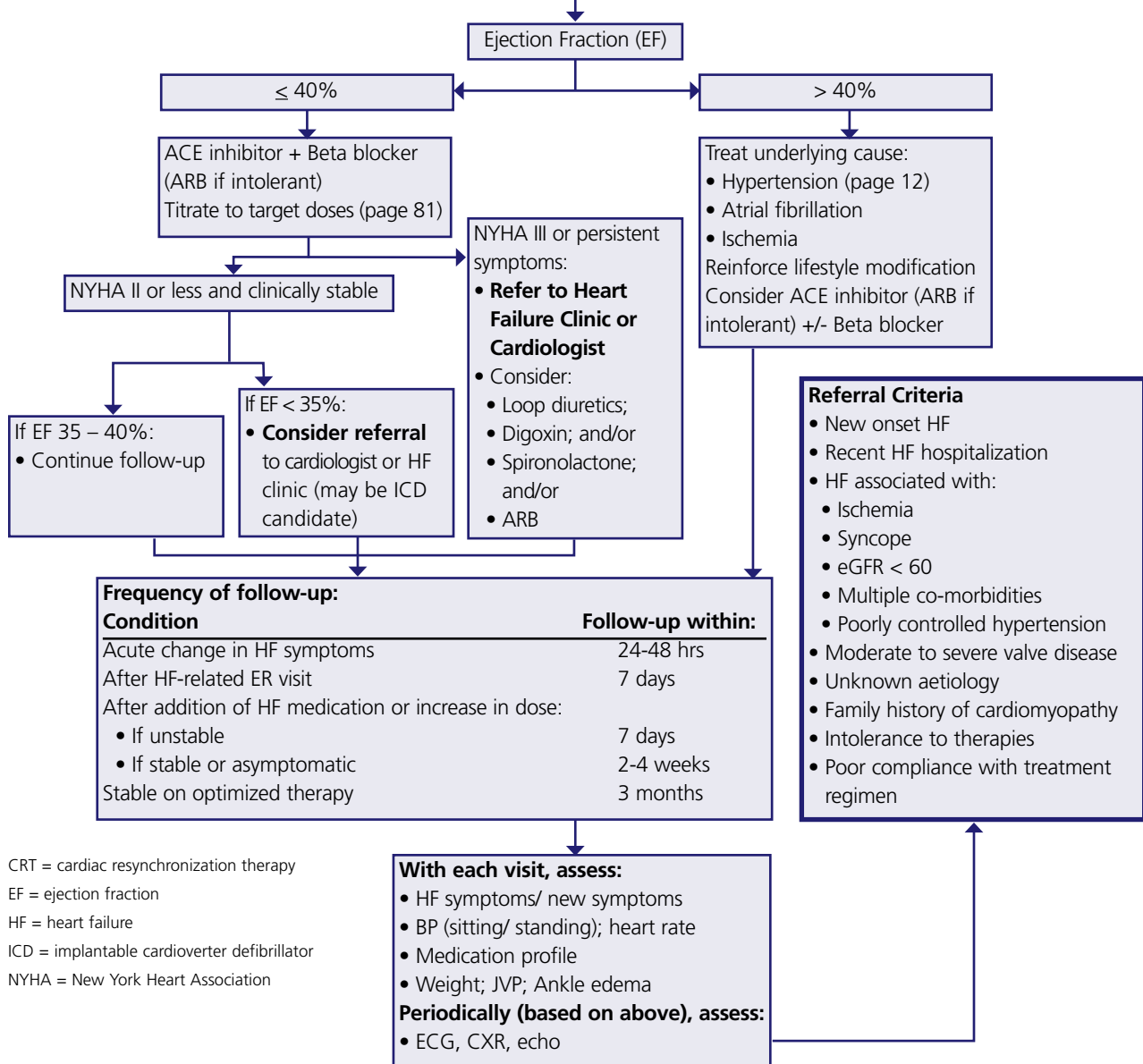


HEART FAILURE MANAGEMENT

All patients with Heart Failure require self-management education which includes the following:

<p>Warning Signs and Symptoms</p> <ul style="list-style-type: none"> • Dyspnea; when flat, during sleep, with less exertion • Fatigue with less exertion • Symptoms at rest • Sudden weight gain • Lightheaded/ faint • Prolonged palpitations 	<p>Lifestyle</p> <ul style="list-style-type: none"> • Eliminate added salt and ↑ sodium foods • Avoid pushing oral fluids • Weigh daily if fluid retention • Attain BMI: 18.5 – 24.9 kg/m² or aim for 5 – 10% weight loss • Engage in regular tolerated activity • Quit smoking • Manage cardiovascular risk factors: <ul style="list-style-type: none"> • Hypertension • Lipids • Diabetes 	<p>Treatment Regimen</p> <ul style="list-style-type: none"> • May require medications such as: <ul style="list-style-type: none"> • ACE inhibitor/ ARB • Beta blocker • Spironolactone, which: <ul style="list-style-type: none"> • Improve survival • May be prescribed in combinations • May require dosage adjustments • Will probably be required over the long term • May produce common side effects • May require referral for consideration of ICD or CRT
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Consider referral to cardiac rehabilitation (page 82) in clinically stable patients with NYHA I-III (page 81)



Condition	Follow-up within:
Acute change in HF symptoms	24-48 hrs
After HF-related ER visit	7 days
After addition of HF medication or increase in dose: <ul style="list-style-type: none"> • If unstable • If stable or asymptomatic 	7 days 2-4 weeks
Stable on optimized therapy	3 months

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

CRT = cardiac resynchronization therapy
 EF = ejection fraction
 HF = heart failure
 ICD = implantable cardioverter defibrillator
 NYHA = New York Heart Association



NEW YORK HEART ASSOCIATION (NYHA) FUNCTIONAL CLASSIFICATION OF HEART FAILURE SYMPTOMS*

Class	Patient Symptoms
Class I (Mild)	No limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, or dyspnea (shortness of breath).
Class II (Mild)	Slight limitation of physical activity. Comfortable at rest, but ordinary physical activity results in fatigue, palpitation, or dyspnea.
Class III (Moderate)	Marked limitation of physical activity. Comfortable at rest, but less than ordinary activity causes fatigue, palpitation, or dyspnea.
Class IV (Severe)	Unable to carry out any physical activity without discomfort. Symptoms of cardiac insufficiency at rest. If any physical activity is undertaken, discomfort is increased.

*This system relates symptoms to everyday activities and the patient's quality of life.

HEART FAILURE MEDICATION TITRATION**

Medication	Start Dose	Target Dose	Precautions
ACE Inhibitor			<ul style="list-style-type: none"> • Initiate ACE inhibitor or ARB if creatinine <180 and stable ($\leq 25\%$ change within the last 3 – 6 months) and K <5.2. • Check electrolytes and creatinine weekly x 2; then biweekly x 2 and with any change in diuretic or dose of ACE inhibitor/ ARB.
Captopril	6.25 mg to 12.5 mg tid	25 mg to 50 mg tid	
Enalapril	1.25 mg to 2.5 mg bid	10 mg bid	
Ramipril	1.25 mg to 2.5 mg bid	5 mg bid	
Lisinopril	2.5 mg to 5 mg od	20 mg to 35 mg od	
ARB			
Candesartan	4 mg od	32 mg od	
Valsartan	40 mg bid	160 mg bid	
Beta blocker			
Carvedilol	3.125 mg bid	25 mg bid	
Bisoprolol	1.25 mg od	10 mg od	
Metoprolol	12.5 mg to 25 mg bid	100 mg bid	
Other			<ul style="list-style-type: none"> • Not recommended in patients already prescribed combination ACE inhibitor <i>and</i> ARB therapy. • Same titration schedule as in the ACE inhibitor/ ARB section. • Avoid combination with other K sparing diuretics. • Discontinue use if K >5.2.
Spirolactone	12.5 mg od	25 mg od	

**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

Director: Dr. H. Haddad
Contact: Tara Hetherington
Tel: 613-761-5363

Description: The Heart Function/ Transplantation Clinic at the University of Ottawa Heart Institute 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: Monday afternoons
Tuesday and Friday mornings

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

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. to 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: Physician referral required.
Fax referral form to: 613-761-4158.



Clinic/Program: **Queensway Carleton Hospital Heart Failure Clinic**

Physicians: Dr. F. Miller; Dr. T. McKibbin
Contact: Joanna Steele
Tel: 613-721-2000 ext. 6334

Description: The Queensway Carleton Hospital Heart Failure 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: Thurs: 8:00 a.m. to 4:00 p.m.

Language: English, French

Cost: N/A

Referral: For patients \geq 75 yrs, fax referral to Dr. F. Miller at 613-721-2582.
For patients < 75 yrs, fax referral to Dr. T. McKibbin at 613-721-4763.
Include any echo, MUGA, ECG, or other pertinent test results along with patient history in referral information.

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: **Cornwall Community Hospital Cardio-Respiratory 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: Individuals with heart failure or COPD

Hours: Variable

Language: English, French

Cost: N/A

Referral: Contact the clinic for referral information

**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: **(1) On-Site Supervised Program**

- 1- to 3-month program
- Supervised on-site, twice-weekly exercise sessions (1 hour/ session)
- Medical assessment by cardiac rehabilitation physician
- Nutrition workshops

Referral to services such as:

- Nutritional counselling
- Stress management
- Smoking cessation
- Vocational counselling
- Psychological counselling
- Social work counselling

(2) Case-Managed Home Program

Provides flexibility for those unable to participate in hospital-based program

- 3-month program
- Tailored program focused on your patients personal heart health goals
- 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 after 3 and 12 months

(3) Brief Program

- Coronary risk factor assessment
- Nutrition education sessions
- Exercise evaluation and tailored home exercise program - **no supervised exercise sessions**
- Total of 4 sessions at UOHI
- Follow-up evaluation scheduled after 3 and 12 months

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: Download referral form: www.ottawaheart.ca/UOHI/doc/FrancoForme_Referral_Eng.pdf; complete form and fax to UOHI; and inform patient that UOHI will contact them directly.



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: **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.

To refer: 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 program
 - Supervised on-site, twice-weekly exercise sessions
 - Education sessions
 - Bilingual staff

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

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 Tues and Thurs, 9:00 a.m. to 5:30 p.m.
Assessment day is Wed, 9:00 a.m. to 2:30 p.m.

Language: English

Cost: N/A but parking costs \$5.00/day

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



APPENDICES

APPENDIX A: FRAMINGHAM RISK SCORE FOR TOTAL CVD³⁸

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 (D'Agostino R et al. Circulation 2008;117:743-753)

POINTS	Age (years)	HDL-C (mmol/L)	Total Cholesterol (mmol/L)	SBP Not Treated (mmHg)	SBP Treated (mmHg)	Smoker	Diabetic	
-3				<120				
-2		>1.6						
-1		1.3-1.6			<120			
0	30-34	1.2-1.3	<4.1	120-129		NO	NO	
1		0.9-1.2	4.1-5.2	130-139				
2	35-39	<0.9		140-149	120-129			
3			5.2-6.2		130-139	YES		
4	40-44		6.2-7.2	150-159			YES	
5	45-49		>7.2	>160	140-149			
6					150-159			
7	50-54				160+			
8	55-59							
9	60-64							
10	65-69							
11	70-74							
12	75+							TOTAL POINTS
Points Allotted								

CVD RISK FOR WOMEN

POINTS	RISK	POINTS	RISK	POINTS	RISK
-2 or less	< 1%	6	3.3%	14	11.7%
-1	1.0%	7	3.9%	15	13.7%
0	1.2%	8	4.5%	16	15.9%
1	1.5%	9	5.3%	17	18.5%
2	1.7%	10	6.3%	18	21.5%
3	2.0%	11	7.3%	19	24.8%
4	2.4%	12	8.6%	20	28.5%
5	2.8%	13	10.0%	21+	> 30%

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)

POINTS	Age (years)	HDL-C (mmol/L)	Total Cholesterol (mmol/L)	SBP Not Treated (mmHg)	SBP Treated (mmHg)	Smoker	Diabetic	
-2		>1.6		<120				
-1		1.3-1.6						
0	30-34	1.2-1.3	<4.1	120-129	<120	NO	NO	
1		0.9-1.2	4.1-5.2	130-139				
2	35-39	<0.9	5.2-6.2	140-159	120-129			
3			6.2-7.2	160+	130-139		YES	
4			>7.2		140-159	YES		
5	40-44				160+			
6								
7	45-49							
8	50-54							
9								
10	55-59							
11	60-64							
12								
13	65-69							
14	70-74							
15	75+							TOTAL POINTS
Points Allotted								

CVD RISK FOR MEN

POINTS	RISK	POINTS	RISK	POINTS	RISK
-3 or less	<1%	5	3.9%	13	15.6%
-2	1.1%	6	4.7%	14	18.4%
-1	1.4%	7	5.6%	15	21.6%
0	1.6%	8	6.7%	16	25.3%
1	1.9%	9	7.9%	17	29.4%
2	2.3%	10	9.4%	18+	> 30%
3	2.8%	11	11.2%		
4	3.3%	12	13.2%		

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 Canada³⁰

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 Canada³¹

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

Source: "Prescribing exercise as preventive therapy" — Reprinted from CMAJ. 2006; 174(7): 961-974. With permission of the publisher. © 2006 Canadian Medical Association. ²⁴

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:

Item	Male	Female	Male	Female	Male	Female
Frequency	Rarely or never		Normally once or twice		At least 3 times	
	0	0	2	3	3	5
Intensity	Light effort		Moderate effort		Intense effort	
	0	0	1	2	3	3
Perceived Fitness	Very poor or poor		Average		Good or very good	
	0	0	3	1	5	3

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)

BMI	Normal						Overweight						Obese	
	19	20	21	22	23	24	25	26	27	28	29	30	35	40
Height (cm)	Weight (kg)													
147	41	44	45	48	50	52	54	56	59	61	63	65	76	87
150	43	45	47	50	52	54	56	58	60	63	65	67	79	90
152	44	46	49	51	54	56	58	60	63	65	67	70	81	93
155	45	48	50	53	55	58	60	62	65	67	70	72	84	96
157	47	50	52	55	57	60	62	65	67	70	72	75	87	99
160	49	51	54	56	59	61	64	66	69	72	74	77	90	102
163	50	53	55	58	61	64	66	69	71	74	77	79	93	105
165	52	55	57	60	63	65	68	71	74	76	79	82	95	109
168	54	56	59	62	65	67	70	73	76	79	81	85	98	112
170	55	58	61	64	66	70	72	75	78	81	84	87	101	116
173	57	60	63	65	69	72	75	78	80	84	86	90	105	119
175	58	61	65	68	70	74	77	80	83	86	89	92	107	123
178	60	63	66	70	73	76	79	82	85	89	92	94	110	126
180	62	65	68	71	75	78	81	85	88	91	95	98	114	130
183	64	67	70	74	77	80	84	87	90	94	97	100	117	134
185	65	69	72	75	79	83	86	90	93	96	100	103	120	137
188	67	70	74	78	81	85	88	92	95	99	102	106	124	141
191	69	73	76	80	84	87	91	95	98	102	105	109	127	145
193	71	75	78	82	86	90	93	97	100	105	108	112	130	149

BMI	Normal						Overweight						Obese	
	19	20	21	22	23	24	25	26	27	28	29	30	35	40
Height (inches)	Weight (pounds)													
58	91	96	100	105	110	115	119	124	129	134	138	143	167	191
59	94	99	104	109	114	119	124	128	133	138	143	148	173	198
60	97	102	107	112	118	123	128	133	138	143	148	153	179	204
61	100	106	111	116	122	127	132	137	143	148	153	158	185	211
62	104	109	115	120	126	131	136	142	147	153	158	164	191	218
63	107	113	118	124	130	135	141	146	152	158	163	169	197	225
64	110	116	122	128	134	140	145	151	157	163	169	174	204	232
65	114	120	126	132	138	144	150	156	162	168	174	180	210	240
66	118	124	130	136	142	148	155	161	167	173	179	186	216	247
67	121	127	134	140	146	153	159	166	172	178	185	191	223	255
68	125	131	138	144	151	158	164	171	177	184	190	197	230	262
69	128	135	142	149	155	162	169	176	182	189	196	203	236	270
70	132	139	146	153	160	167	174	181	188	195	202	207	243	278
71	136	143	150	157	165	172	179	186	192	200	208	215	250	286
72	140	148	154	162	169	177	184	191	199	206	213	221	258	294
73	144	151	159	166	174	182	189	197	204	212	219	227	265	302
74	148	155	163	171	179	186	194	202	210	218	225	233	272	311
75	152	160	168	176	184	192	200	208	216	224	232	240	279	319
76	156	164	172	180	189	197	205	213	221	230	238	246	287	328



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