

Education/Counseling

Behavioural

Folic acid (A):

- To prevent neural tube defects (NTD) in all women capable of becoming pregnant
- Low risk-women: Folic acid supplementation of 0.4 to 0.8 mg daily taken at least one month before and three months after conception.
- High-risk women (previous pregnancy with NTD): Supplementation with 4 mg folic acid daily during 3 months before and 3 months after conception reduces recurrence.

Adverse nutritional habits (B):

- Prevention of coronary artery disease, colon cancer
- Provide general dietary advice: decrease fat, increase fiber.
- Those at increased risk, consider referral to a clinical nutritionist or other professional with specialized nutritional expertise.

Dietary advice on fat/cholesterol (B):

- Prevent coronary heart disease
- Decrease intake of total fat, saturated fat, and cholesterol

Calcium 1000-1500mg/day¹:

- Prevent osteoporosis
- The Osteoporosis Society of Canada (OSC) recommends adults have 1000 to 1500 mg of elemental calcium per day.
- If this amount cannot be provided by diet alone (usually three or more servings of dairy products), then calcium supplementation should be recommended.¹

Vitamin D¹:

- Prevent osteoporosis
- The OSC recommends 200 IU/day in 50-64 year olds
- 400-800 IU/ day in people ≥ 65 years or with osteoporosis

From CTFPHC (B): *Calcium and vitamin D supplementation alone prevents osteoporotic fractures in postmenopausal women without documented osteoporosis.*

Moderate physical activity (B):

- Prevention of cardiovascular disease and hypertension.
- Physical activity can also contribute to the prevention of obesity, Type II diabetes mellitus and osteoporosis.
- Recommend moderate-level physical activity performed consistently to accumulate 30 minutes or more over the course of most days of the week.
- Moderate intensity physical activities include: normal walking, golfing on foot, slow biking, raking leaves, cleaning windows, slow dancing, light restaurant work.
- Note: Doing moderate physical activity is a B recommendation but physician counseling is a C.

Avoid sun exposure, use protective clothing (B):

- Prevent skin cancer
- Evidence from epidemiologic studies focusing on etiology of melanoma, prudence and low cost/side-effects, supports the avoidance of excessive sun exposure at mid-day, plus the use of protective clothing.
- Sunscreen use is a C recommendation for general population (last updated 1994).

Safe sex practices/ Sexually Transmitted Diseases counseling (esp. Gonorrhea counseling) (B):

- Prevent transmission of sexually transmitted diseases.
- Abstinence is most effective, fair evidence to use condoms.

Smoking Counseling • To Prevent Tobacco-Caused Disease

- **Smoking cessation (A):** counseling effective to reduce the proportion of smokers.
- **Nicotine replacement therapy (A):** may be offered as an adjunct to smoking cessation; it increases cessation rates.

Smoking Counseling cont'd

- *Fruit and Green leafy vegetables for smokers:* eat an average of seven portions of green leafy vegetables or fruit per week to lower risk of lung cancer.
- *Referral to validated smoking cessation program:* Referral by physician improves participation in group programs.

Alcohol Counseling

- Prevent Alcohol related Morbidities
- *Case finding for problem drinking (B):* Standardized questionnaires (e.g. CAGE, AUDIT) and/or patient inquiry.
- *Counseling for problem drinking (B):* Clarify association between alcohol consumption and alcohol-related consequences; advice to reduce consumption.

Elderly

- **Cognitive assessment (A and B):**
- When caregivers or informants describe cognitive decline in an individual, these observations should be taken very seriously; cognitive assessment and careful follow-up are indicated (A).
- Memory complaints by patient or caregiver should be evaluated and the individual followed to assess progression (B).
- **Fall assessment:**
- Good evidence to perform multidisciplinary post-fall assessment on elderly patients who have a history of falls or to refer elderly patients to multidisciplinary post-fall assessment teams, where such a service is available (A).
- There is insufficient evidence to support including assessment and counseling of elderly patients for the risk of falling in the routine health exam of the elderly (I).

Oral Hygiene • To prevent periodontal disease, and oral cancer

- **Brushing/flossing teeth (A, B):** Flossing teeth is effective to preventing gingivitis in adults. Brushing teeth is essential in the application of fluoride dentifrice to prevent dental caries (A) and prevention of gingivitis (B).
- **Fluoride (toothpaste/supplement) (A):** Daily use of fluoride toothpaste gives significant reductions in decay and/or daily fluoride supplements (only where water fluoride levels are less than optimal).
- *Tooth scaling and prophylaxis (B):* In periodontally healthy patients, intensive professional oral hygiene and prophylaxis prevents chronic gingivitis and periodontitis. Annual scaling provides no additional benefit for those who maintain good oral hygiene.
- **Smoking cessation (A, B):** To reduce the risk of oral cancer. Intervention programs have reduced the incidence of precancerous lesions. Also prevents periodontal disease due to smoking (B).

Personal Safety

- *Seat belts (B):* Prevent injury from Motor Vehicle Collisions. Physicians can influence significant short-term improvement in seat belt use.
- **Noise control programs/hearing protection (A):** Good evidence to support noise control programs and hearing protection but no comment made on impact of physician counseling.

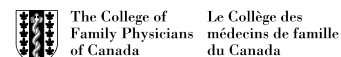
Parents with children < 15 years of age

- *Poison control prevention (B):* Counseling on prevention of poisoning and poison control centre phone number stickers to the parents of young children.
- *Smoke detectors, non-flammable sleepwear and hot water thermostat settings (B):* Counseling can increase the number of safety features in the home but impact on injury is unknown.

Please note:

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Functional Inquiry

Depression (B): • Screen adults if there are integrated programs for feedback to patients and access to case management or mental health care:

- 1) Over the past 2 weeks, have you felt little pleasure in doing things?
 - 2) Over the past 2 weeks, have you felt down, depressed or hopeless?
- Positive screen is a yes answer to one or both questions.

Physical Examination

Blood Pressure(B): To screen for hypertension.

- If BP is mildly elevated do three further readings over 6 months.
- If BP severely elevated, shorten intervals between readings.
- Treatment of hypertension in adults lowers risk of stroke, cardiac events and death (A recommendation).

BMI (Body Mass Index):

- B recommendation for obese adults with obesity-related disease.
- C recommendation for general adult population.

Screening for hearing impairment in elderly (B):

- All of the following have high sensitivity to detect hearing loss
- *Whispered voice test:* Whispered-voice, out of field of vision
- *Audioscope*
- *Inquiry:* Ask the patient about any hearing difficulty

Snellen test (B):

- In elderly, reliably detects reduced visual acuity.

Breasts (A): • To screen for breast cancer.

- Screen women aged 50-69 years by clinical examination and mammography, every 1-2 years.

Pap(B): • To screen for invasive cervical carcinoma.

- Annual screening following initiation of sexual activity or age 18 (sic)
- After 2 normal smears, screen every 3 years to age 69.
- Increase frequency for women with risk factors: age of first sexual intercourse < 18 yrs, many sexual partners or consort with many partners, smoking or low socioeconomic status.

Waist circumference (WC)^{2,6,7:}

- A WC above 102 cm (40 in) for men and 88 cm (35 in) for women is associated with increased risk of type 2 diabetes, coronary heart disease and hypertension.
- The WC should be used in those with a BMI between 18.5 and 34.9 to identify additional risk.

Waist to Hip Ratio (WHR)^{7:} WHR >1.0 for men and >0.85 for women is considered a marker for abdominal obesity.

Immunizations

Tetanus (A):

- Routine booster doses every 10 years if had primary series
- Adults without a primary series need three doses.
- Primary adult series are given at time 0, 1-2 months, and 6-12 months.⁵

Pneumococcal vaccine (A)^{4:} • To all persons ≥ 65 years

- High Risk: All persons >5 years with the following conditions: sickle cell disease, asplenia, splenic dysfunction, chronic cardiorespiratory disease (except asthma), cirrhosis, alcoholism, chronic renal disease, nephrotic syndrome, diabetes mellitus, chronic CSF leak, HIV infection, smokers, and other conditions associated with immunosuppression (Hodgkin's disease, lymphoma, multiple myeloma, induced immunosuppression for organ transplantation).

Influenza vaccine (A)^{4:} • Annually immunize the following:

- All adults

High risk groups include:

- ≥ 65 years of age
- Adults and children with chronic cardiac or pulmonary disorders (including bronchopulmonary dysplasia, cystic fibrosis, and asthma) severe enough that they have regular follow-up and hospital care,
- Adults and children with chronic diseases, eg. diabetes mellitus, metabolic diseases, cancer, immunodeficiency, immunosuppression, renal disease, anemia, and hemoglobinopathy,
- People at high risk of influenza complications who are traveling to places where the virus is likely present,
- Health care workers and other personnel who have significant contact with people in the high-risk groups previously described

- Household contacts (including children) of a high risk person who cannot be immunized or may respond inadequately to immunization.

Rubella (B): According to NACI^{4:}

- Give one dose of a vaccine to non-pregnant women of childbearing age unless there is proof of immunity via immunization records or serology.
- They do not recommend serologic testing as it may delay needed immunization.⁴
- According to the Task Force, the decision on universal vaccination or screening for immunization status followed by vaccination depends on the physician's practice setting (i.e., cost of serologic testing, will patient follow-up for needed vaccination).

Varicella (B):

- Determine Varicella infection status by history or serology.
- Administer to those susceptible to Varicella infection, including: women of childbearing age (but not during pregnancy), health care workers, household contacts of immunocompromised people, adults who may be exposed at work (teachers, day care workers), other susceptible adults, especially new immigrants from tropical climates.
- Give two doses at least 4 weeks apart, if ≥ 13 years.⁴

Human Papillomavirus: According to NACI^{4:}

- Recommended for females between 9 and 13 years
- Would benefit females between 14 and 26 years of age even if already sexually active
- Give three doses at 0, 1 and 6 months

Pertussis: According to NACI^{4:}

- Single dose of acellular pertussis vaccine to all adults who have not received a dose in the past.

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Investigations/Labs

Mammography with Clinical Breast Exam (A):

- Screen women aged 50-69 every 1-2 years for breast cancer.
- C recommendation for women aged 40-49 at average risk.
- Frequent screening may be required (every 12-18 months) in 40-49 year group.
- Upon reaching the age of 40, women should be informed of the potential benefits and risks of screening mammography to decide at what age they wish to begin screening.

Colorectal cancer screening of patients ≥ 50 years:

- **Hemoccult multiphase every 1-2 years (A)** OR
- *Flexible Sigmoidoscopy (B)* (Frequency not established)
- Colonoscopy (Frequency not established)⁸

Cervical cytology (B): • See Pap explanation.

Screening for Sexually Transmitted Infections in High Risk Populations:

- High-risk Populations: individuals under age 30 with at least 2 sexual partners in the previous year or age 16 years at first intercourse, prostitutes, sexual contacts of individuals known to have an STI.
- **Syphilis (A):** Serology testing
- **Gonorrhea (A):** Screen with Gram stain and culture of cervical or urethral specimen. Urine testing available.
- *Chlamydia (B):* Screen with culture or polymerase chain reaction. Urine testing available.
- **HIV (A):** Screen with blood test
- Hepatitis B virus (HBV)^{4,5}: Screen with hepatitis B surface antigen (HBsAg) in blood.

Bone Mineral Density: Screen for osteoporosis

From CTFPHC (B):

To prevent fragility fractures: Screen postmenopausal women by DEXA if over 65 years of age or have a history of previous fracture, or have a have an Osteoporosis Risk Assessment Instrument score ≥ 9 or have a SCORE score ≥6.

From Osteoporosis Society of Canada¹:

Screen if 1 major or 2 minor risk factor(s)

Major risk factors: age > 65, vertebral compression fracture, fragility fracture after age 40, family history of osteoporotic fracture, systemic glucocorticoid therapy of >3 months duration, malabsorption syndrome, primary hyperparathyroidism, propensity to fall, osteopenia apparent on x-ray film, hypogonadism, early menopause (< 45 years)

Minor Risk Factors: rheumatoid arthritis, past history of clinical hyperthyroidism, chronic anticonvulsant therapy, low dietary calcium intake, smoker, excessive alcohol intake, excessive caffeine intake, weight <57 kg, weight loss >10% of weight at age 25, chronic heparin therapy

Fasting Lipid Profile (total cholesterol, HDL-C, triglyceride and LDL-C)²: • Screen all men over the age of 40, women who are postmenopausal or over the age of 50 (after a 9 h to 12 h fast)

- Screen adults with the following risk factors at any age:
 - Diabetes Mellitus
 - Current or recent (within the previous year) smoker
 - Hypertension
 - Abdominal obesity: waist circumference > 102 cm in men or >88 cm in women (lower cut-offs are appropriate for South and East Asians)
 - Family History of premature coronary artery disease; especially in primary male relatives < 55 yrs and female relatives < 65 yrs
 - Physical exam manifestations of hyperlipidemia
 - Exertional chest discomfort, dyspnea or erectile dysfunction
 - Chronic kidney disease or SLE
 - Evidence of atherosclerosis
- Screen at any age adults with major CAD risk factors
- Screening frequency should be every one to three years or sooner.

Target Lipid Values by Level of Risk²

| Level of Risk | LDL-C level mmol/L | Total Cholesterol to HDL-C ratio |
|--|--------------------|----------------------------------|
| High (10 yr risk of CAD ≥20% or hx of CHD or DM) | <2.0 | and <4.0 |
| Moderate (10 yr risk 10-19%) | <3.5 | and <5.0 |
| Low (10 yr risk <10%) | <5.0 | and <6.0 |

Fasting plasma glucose (FPG)³: • Screen for Type II diabetes mellitus

- Should be done every 3 years in adults ≥40 years of age or more frequently if one of the following risk factors:

| | | |
|--|---|--|
| <ul style="list-style-type: none"> • First-degree relative with DM • Presence of complications associated with DM • Hypertension • Dyslipidemia • Overweight • Abdominal obesity | <ul style="list-style-type: none"> • Member of high risk population (Aboriginal, Hispanic, Asian, South Asian or African descent) • History of impaired glucose tolerance or impaired fasting glucose | <ul style="list-style-type: none"> • Vascular disease • History of gestational DM or macrosomic infant • Schizophrenia • Polycystic ovarian syndrome • Other risk factors |
|--|---|--|

- FPG ≥ 7.0 mmol/L is diagnostic of diabetes mellitus
- *From CTFPHC screen adults with hypertension or hyperlipidemia to prevent cardiovascular events and death (B).*

References

Unless otherwise stated, recommendations come from 1. The Canadian Task Force on Preventive Health Care: *The Canadian Guide to Clinical Preventive Health Care*. Ottawa: Minister of Supply and Services Canada and <http://www.ctfphc.org/>

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