



The Physical Activity

Dr. Shakeel Ahmed



CANADIAN 24-HOUR MOVEMENT GUIDELINES

An Integration of Physical Activity, Sedentary Behavior, and Sleep

FOR ADULTS 65 YEARS OR OLDER

<https://csepguidelines.ca>

<https://www.canada.ca/en/services/health>



Public Health
Agency of Canada

Agence de la santé
publique du Canada



PHYSICAL ACTIVITY

Performing a variety of types and intensities of physical activity, which includes:



- **Moderate to vigorous aerobic physical activities** such that there is an accumulation of at least 150 minutes per week
- Muscle strengthening activities using major muscle groups at least twice a week
- Physical activities that challenge balance



- Several hours of **light physical activities**, including standing

SLEEP



Getting 7 to 8 hours of good-quality sleep on a regular basis, with consistent bed and wake-up times

SEDENTARY BEHAVIOUR



Limiting sedentary time to 8 hours or less, which includes:

- No more than 3 hours of recreational screen time
- Breaking up long periods of sitting as often as possible



Healthy 24 Hours

The Whole Day Matters



Adults 65 Years and Older

Move More

Reduce Sedentary Time

Sleep Well

Canada's first ever 24-Hour Movement Guidelines

The Whole Day Matters

**MOVE
MORE**



Make your whole day matter.

HOW MUCH PHYSICAL ACTIVITY?

Some is better than none!

Add different types of physical activity, muscle strengthening activities and standing.

The routine rituals of daily living such as casual neighbourhood walks, gardening, household chores and taking stairs instead of the elevator all contribute towards a healthy 24 hours.

The Whole Day Matters

**REDUCE
SEDENTARY
TIME**



Make your whole day matter.

HOW MUCH SEDENTARY TIME?

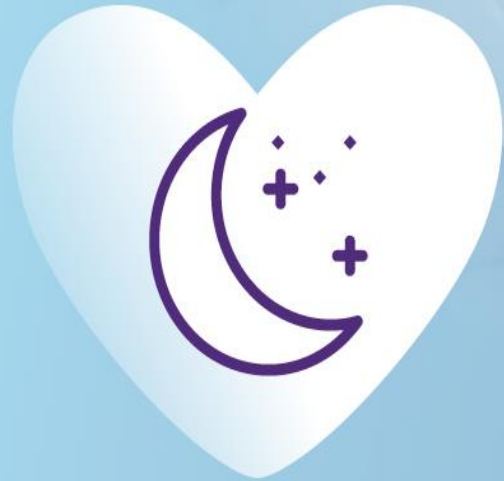
Limit sedentary time to 8 hours or less per day

No more than 3 hours of recreational screen time

Breaking up long periods of sitting where possible

The Whole Day Matters

**SLEEP
WELL**



Make your whole day matter.

GETTING ENOUGH SLEEP?

For 18-64, 7 to 9 hours of good quality sleep

For 65+ years, 7 to 8 hours of good quality sleep

Sleep Hygiene

Consistent bed, sleep and wake up times

PREVALENCE OF CHRONIC DISEASES AMONG CANADIAN ADULTS

HYPERTENSION



25%

OSTEOARTHRITIS



14%

MOOD AND/OR
ANXIETY DISORDER



13%*

OSTEOPOROSIS



12%†

DIABETES



11%

ASTHMA



11%

CHRONIC OBSTRUCTIVE
PULMONARY DISEASE



10%†

ISCHEMIC
HEART DISEASE



8%

CANCER



8%*

DEMENTIA



7%§

Activities

Physical Activities

Weight bearing/non-weight bearing, Sport and Recreation

Environments

Home/work/community; indoors/outdoors; land/ water

Contexts

Leisure, transportation, occupation, household across all seasons.

Sedentary Lifestyle

Should limit long periods sedentary behaviours and screen time

Sleep

Practice healthy sleep hygiene (Routines, Behaviours, and Environments)

ASSESS YOUR CURRENT PHYSICAL ACTIVITY

Moderate to Vigorous Aerobic Physical Activity

Brisk walking, Cycling or Jogging

Canadian Guidelines

Moderate- to vigorous intensity physical activity, at least 150 minutes per week.

Strengthening muscles and bones at least two times per week

Health Benefits of Physical Activity

Lower Risk

Obesity

Risk of Mortality

Cardiovascular Disease and Hypertension

Diabetes

Cancers

Anxiety, Depression, Dementia

Adverse Lipid Profile

Falls and Fall-related Injuries

Improve

Bone Health

Cognition

Quality of Life

Physical Disability

1. “Are you able to do strenuous activities like fast walking or bicycling?”
2. “Are you able to do heavy work around the house like washing windows, walls, or floors?”
3. “Are you able to go shopping for groceries or clothes?”
4. “Are you able to get to places out of walking distance?”
5. “Are you able to bathe, either a sponge bath, tub bath, or shower?”
6. “Are you able to dress, like putting on a shirt, buttoning and zipping, or putting on shoes?”

The Timed Up and Go (TUG) Test

1. Rise from the chair.
2. Walk 10 feet briskly
3. Turn, walk back and sit down”.

If Unable to complete in 15 seconds,

Referral

- Fall Prevention Referral
- Physiotherapy Clinic
- Assistive Device



Joint Problems

Over time diabetes can lead to the breakdown of the musculoskeletal system.

This can involve **joint damage** and a limited **range of joint movement**.

When the joints are damaged, the cushioning no longer works as effectively. As a result, the bones can rub together, causing inflammation, stiffness, and pain. A person may experience limited joint mobility.

Diabetes can also cause changes in nerves and small blood vessels. As a result, healing is difficult

Common conditions include:

- Carpal Tunnel Syndrome
- Dupuytren's Contracture
- Trigger finger
- Frozen Shoulder
- Rotator Cuff Tendinitis. (Impingement Syndrome)
- Osteoarthritis

The joint problems often correlate with the duration and control of diabetes.

Steps to Ease the Knee pain

Lose weight. Losing a pound of excess weight can take about four pounds of pressure off your knees when walking.

Physical activity. To build support of the knees, do strength training, especially of the quad muscles on the front of the thigh. Aerobic exercise builds strength and can reduce pain. Stretching can help prevent stiffness.

Mechanical aids. A cane, crutch, or walker can take a load off painful knees.

Heat and cold. A heating pad can ease ongoing stiffness and soreness in joints. For acute pain and swelling, switch to ice packs.

Massage. Deep-tissue massage “helped a lot” with osteoarthritis.

Use drugs carefully.

Ibuprofen (*Advil*®, *Motrin IB*®) and naproxen (*Aleve*®) can ease pain and inflammation. But they may cause stomach bleeding and high blood pressure, if taken over a longer time. Try to use them only for short periods.

Acetaminophen (*Tylenol*®) can also help reduce pain, but high doses can damage your liver. Make sure you take less than 8 tablets a day.

Diabetes

Diabetes is a chronic condition characterized by decrease insulin and increased blood glucose.

Insulin is a hormone that delivers blood glucose into the body's cells.

If a person has high blood glucose, it can lead to serious health conditions.

Diabetes affecting up to 10% of Canadians

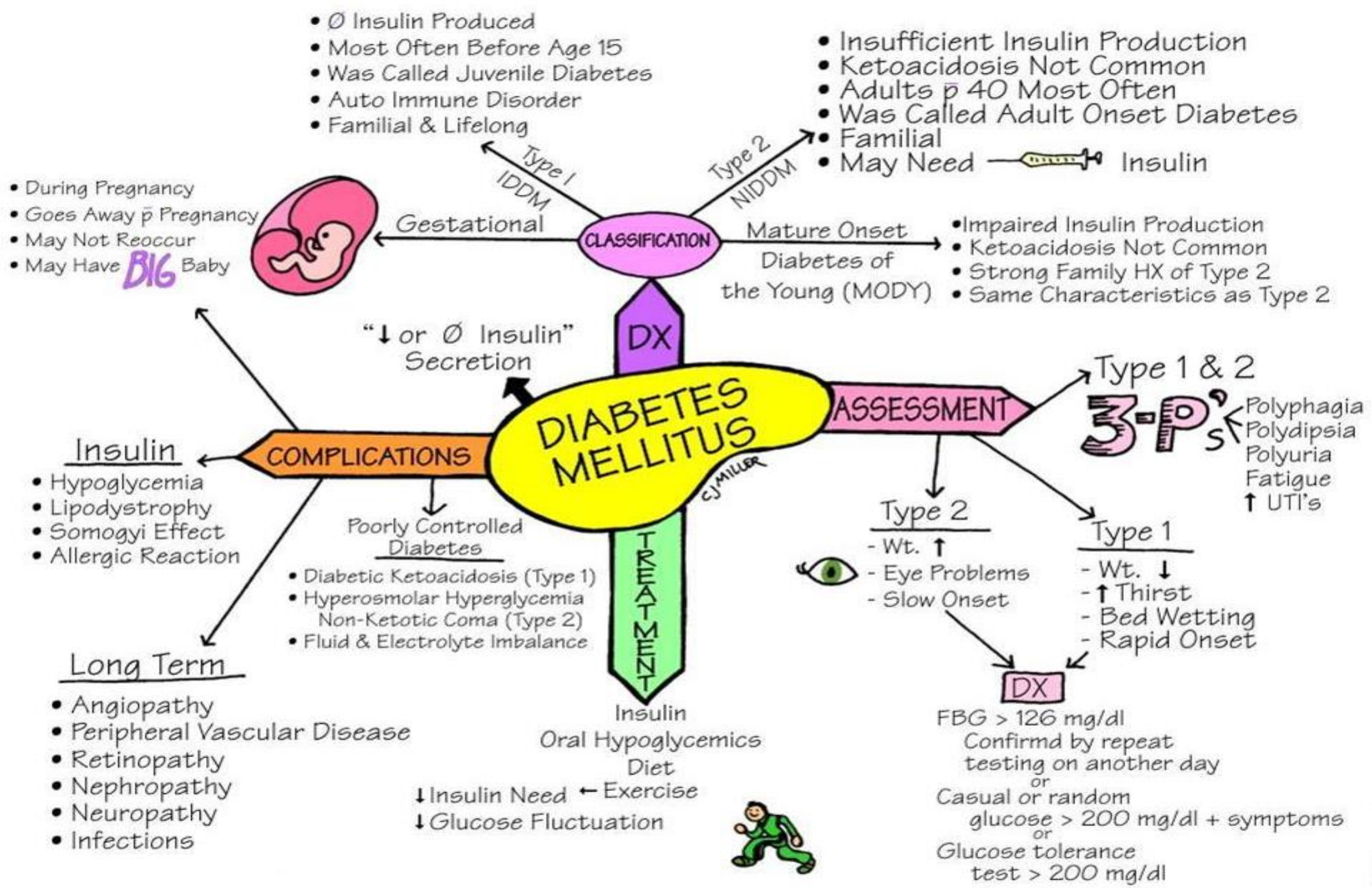
High incidence due to hereditary, obesity, sedentary lifestyle, and age of the population

Leading cause of;

- Eye problems, Cataract, Glaucoma and Blindness*
- Kidney Failure leading to Dialysis*
- Hypertension, Heart Attack and Stroke*
- Sexual problem including Erectile Dysfunction*
- Pregnancy Risks to Mother and Baby*
- Mobility problem and foot amputation*

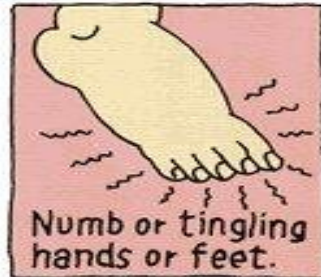
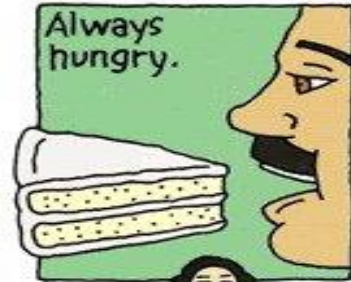
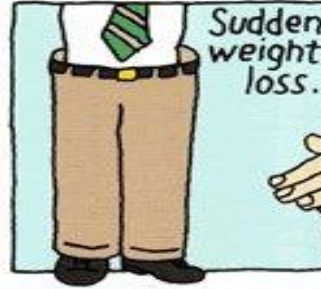
<https://www.diabetes.ca>

*Canadian with Diabetes are **Twice** likely to die as compared to Non-Diabetic population*



DIABETES

KNOW THE SYMPTOMS



If you have any of these symptoms, see your doctor. For more information about diabetes call Eli Lilly and Company at 1-800-545-5979 or Boehringer Mannheim Corporation at 1-800-858-8072.

Provided as an educational service
by Eli Lilly and Company
and Boehringer Mannheim Corporation



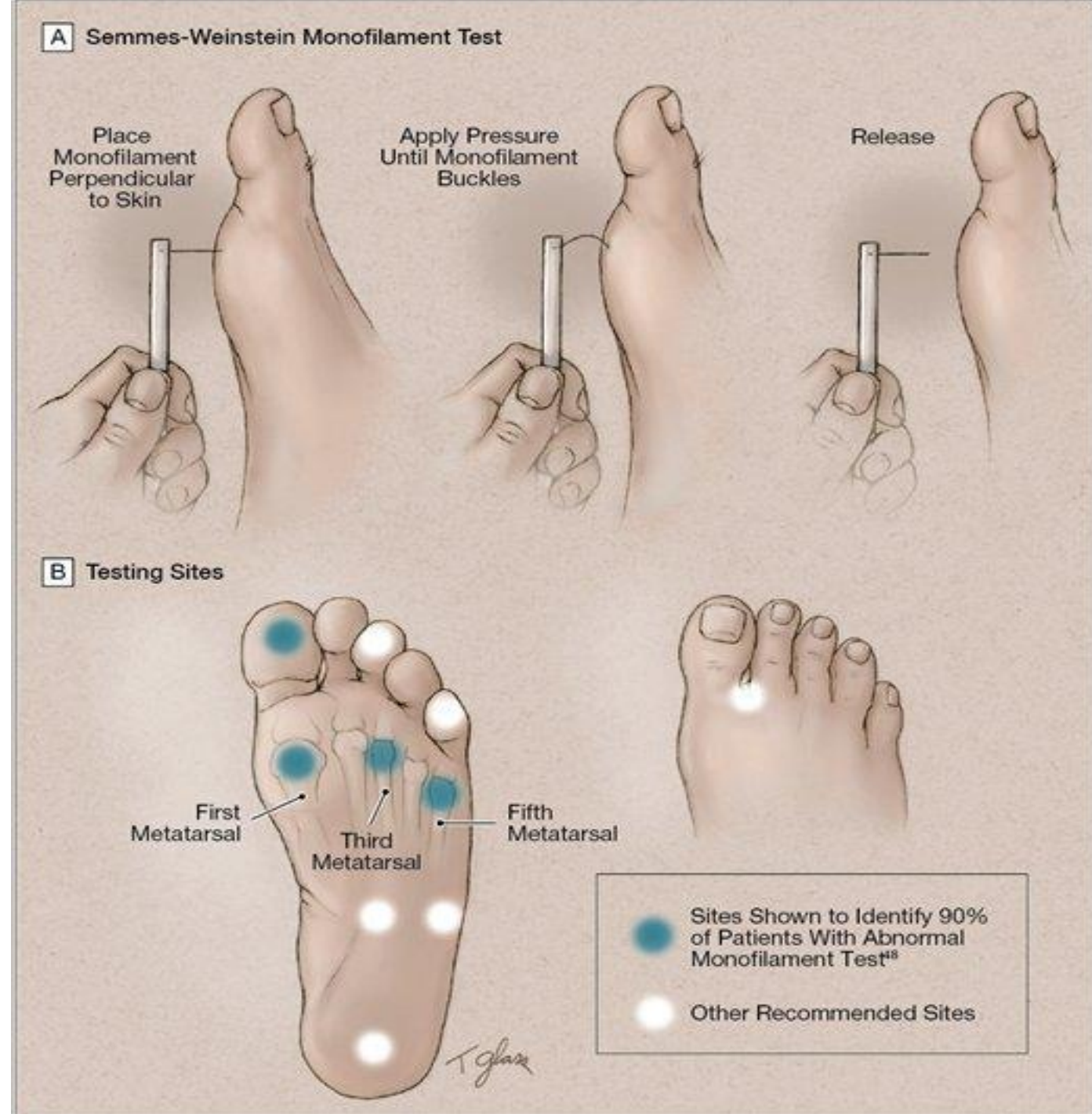
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Diabetic Foot Test

You may use a piece of stiff fishing line string to do this easy Diabetic foot self test.

If you have lost sensation in any of the spots indicated in the diagram, seek medical advice from your family doctor to get a professional diagnosis and medical intervention.

'An ounce of prevention is worth a pound of cure.'



Diet

Carbohydrates (*Low bakery / High Fiber / Whole grains*)

Fat / cholesterol (*Low animal fat, High good cholesterol / Nuts*)

Calcium (*Milk / Dairy / Cheese 1000-1200 mg/day*)

Vitamin A & D (*400-2000 IU/day*)

Vegetable and Fruits

Low salt

**Have plenty of
vegetables and fruits**

Eat protein foods

**Make water
your drink
of choice**



Eat a Variety of Healthy Foods

**Choose
whole grain
foods**

Overweight and Obesity by BMI

The BMI is a ratio of weight-to-height.

Research studies in large groups of people have shown that the BMI can be classified into ranges associated with health risk.

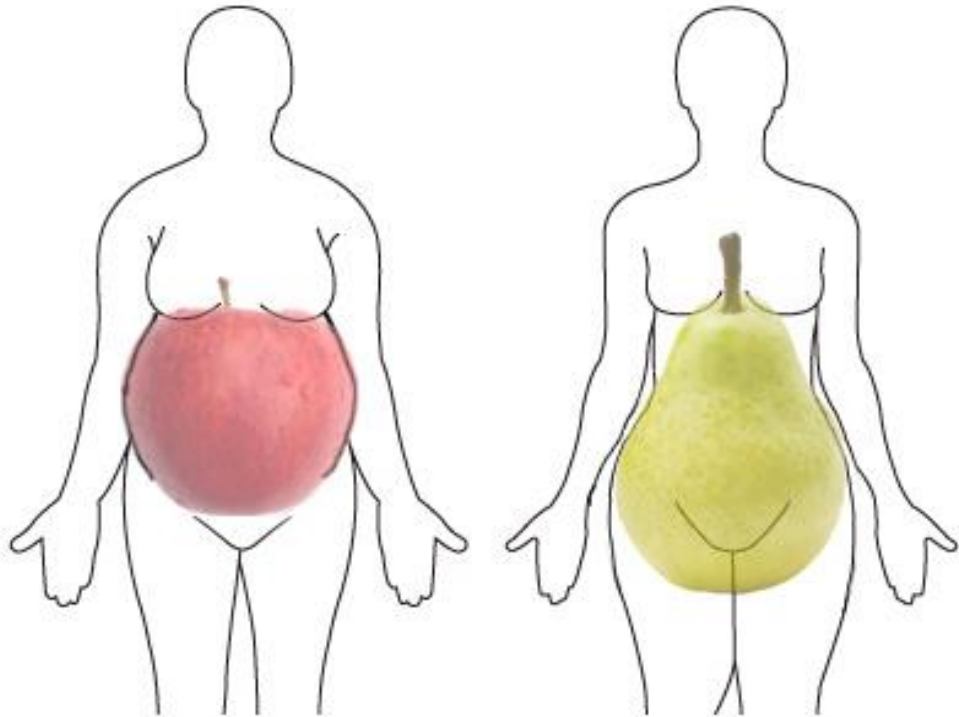
There are four categories of BMI ranges in the Canadian weight classification system.

<u>Obesity Class</u>	<u>BMI (kg/m²)</u>
• Underweight	< 18.5
• Normal	18.5–24.9
• Overweight	25.0–29.9
• Obese	30.0 and Over

You can also calculate your BMI using this formula:

$$\text{BMI} = \text{weight in kilograms} / (\text{height in meters})^2$$

Apple and Pear Body Shapes



Absolute Waist Circumference

> 102 cms (40 in) in men

> 88 cms (35 in) in women

Waist–Hip Ratio

Waist Circumference / Hip Circumference

> 0.9 for men and > 0.85 for women

People who have metabolic syndrome typically have;

Apple-Shaped Bodies

Larger waists and carry a lot of weight around their abdomens.

Pear-Shaped Bodies

Carrying more of your weight around your hips and having a narrower waist doesn't increase your risk of diabetes, heart disease and other complications of metabolic syndrome.

The Metabolic Syndrome

Present with Abdominal Obesity, High BP, Impaired Glycemic Control, and Dyslipidemia.
with an ↑ risk mortality from CAD

Diagnosis

Central Obesity

(waist >102 cms /40 inches in men , >88 cms /35 inches in women)

+ Two of the following criteria must be met:

- **Triglycerides** ≥ 1.7 mmol /L (150 mg/dL).
- **Good Cholesterol** (HDL- C) < 1.0 mmol/L, 40mg in men and 1.3 mmol/L,50mg in women
- **Blood Pressure** ≥ 130/85 mmHg or on antihypertensive drugs.
- **Fasting Glucose** ≥ 5.6 mmol/L (100 mg/dL).

Management

Intensive weight loss, Bad cholesterol lowering, Diabetes and Blood Pressure control.

Annual Physical Examination

- Hemoccult Multiphase 2 years FOBT or FIT
- Hearing (whispered voice test)*
- Vision (Cataract, Glaucoma and Age-Related Eye Changes)*
- Lipid Profile every 1-5 years
- A1C or FPG*
- Bone Mineral Density (women / men if at risk)
- Low dose CT scan for screening of Lung Cancer if risk factors (≥ 30 pack/years)*
- Abdominal Aortic Aneurysm screen (ultrasound once 65 to 80 years)*

Immunizations

Tetanus x 10 years

Influenza x 1 year

Pneumonia vaccine

Whooping cough vaccine

Shingles vaccine (2 doses)

Covid vaccine (2 doses)



CANADIAN GERIATRICS SOCIETY

GERIATRICS 5-Ms

A simplified communication framework to describe the core competencies in Geriatrics. It is comprehensible and memorable

1. **MIND** Dementia, Delirium, Depression
2. **MOBILITY** Impaired gait and balance, fall injury prevention
3. **MEDICATIONS** Polypharmacy, Deprescribing, Optimal prescribing, Adverse effects and medication burden
4. **MULTI-COMPLEXITY** Multi-morbidity, Complex bio-psychosocial situations
5. **MATTERS MOST** Each individual's own meaningful health outcome goals and care preferences.

Functional Assessment in Elderly

Activities of Daily Living (ADL)

- Ambulating
- Bathing
- Continence
- Dressing
- Eating
- Transferring
- Toileting

Instrumental Activities of Daily Living (IADL)

- Shopping
- Housework
- Accounting/Managing finances
- Food preparation
- Transportation
- Telephone
- Taking medications

Activities of Daily Living (ADL)

Ambulating

- *Are you able to stand up from a chair without any assistance?*
- *How is your walking? Do you need to use a cane or a walker?*

Bathing

- *Do you bathe yourself and do your own grooming?*
- *Do you need any assistance getting in and out of the bathtub?*

Continence

- *Do you have any difficulties passing urine or leakage, or urgency?*

Dressing

- *Do you dress yourself?*

Eating

- *Do you have any difficulties eating foods or drinking ?*

Transferring

- *Do you get out of bed by yourself in the morning?*
- *Do you have any difficulties getting up and down stairs?*

Toileting

- *Do you go to the bathroom by yourself?*

Instrumental Activities of Daily Living (IADL)

Shopping, Housework / Cleaning, Food preparation / Cooking

- *Who does the cooking, cleaning, laundry and shopping in your home?*

Accounting / Managing finances

- *Who does the banking, pays the bills, and makes financial decisions?*

Telephone

- *How do you get to appointments?*

Taking medications

- *Does anyone help you to take your medications?*

Transportation / Driving

- *Do you drive? If so, are there any problems with your driving?*
- *Have you been involved in any traffic accidents recently or received any traffic tickets/violations?*



Saint Louis University

Rapid Geriatric Assessment*



*There is no copyright on these screening tools and they may be incorporated into the Electronic Health Record without permission and at no cost.

ID#: _____ Sex: _____ Age: _____ Primary Care Provider Y / N
 Ethnicity (circle): African/Am Asian Caucasian Hispanic Non-Hispanic

The Simple “FRAIL” Questionnaire Screening Tool

- F**atigue: Are you fatigued?
- R**esistance: Cannot walk up one flight of stairs?
- A**erobic: Cannot walk one block?
- I**llnesses: Do you have more than 5 illnesses?
- L**oss of weight: Have you lost more than 5% of your weight in the last 6 months?

Scoring: 3 or greater = frailty; 1 or 2 = prefrail

From Morley JE, Vellas B, Abellan van Kan G, et al. *J Am Med Dir Assoc* 2013;14:392-397.

SARC-F Screen for Sarcopenia (Loss of Muscle)

Component	Question
S trength	How much difficulty do you have in lifting and carrying 10 pounds? Scoring: None = 0 Some = 1 A lot or unable = 2
A ssistance in Walking	How much difficulty do you have walking across a room? Scoring: None = 0 Some = 1 A lot, use aids or unable = 2
R ise from a Chair	How much difficulty do you have transferring from a chair or bed? Scoring: None = 0 Some = 1 A lot or unable without help = 2
C limb stairs	How much difficulty do you have climbing a flight of ten stairs? Scoring: None = 0 Some = 1 A lot or unable = 2
F alls	How many times have you fallen in the last year? Scoring: None = 0 1-3 Falls = 1 4 or more falls = 2

Total score of 4 or more indicates Sarcopenia

From Malmstrom TK, Morley JE. *J Frailty and Aging* 2013;2:55-6.

SNAQ (Simplified Nutritional Assessment Questionnaire)

My appetite is

- a. very poor
- b. poor
- c. average
- d. good
- e. very good

When I eat

- a. I feel full after eating only a few mouthfuls
- b. I feel full after eating about a third of a meal
- c. I feel full after eating over half a meal
- d. I feel full after eating most of the meal
- e. I hardly ever feel full

Food tastes

- a. very bad
- b. bad
- c. average
- d. good
- e. very good

Normally I eat

- a. Less than one meal a day
- b. One meal a day
- c. Two meals a day
- d. Three meals a day
- e. More than three meals a day

Scoring: a=1, b=2, c=3, d=4, e=5.

A score ≤ 14 indicates significant risk of at least 5% weight loss within 6 months.

Rapid Cognitive Screen (RCS)

- 1. **Please remember these five objects. I will ask you what they are later.**

[Read each object to patient using approx. 1 second intervals.]

Apple Pen Tie House Car

- 2. [Give patient pencil and the blank sheet with clock face.] **This is a clock face. Please put in the hour markers and the time at ten minutes to eleven o'clock**
[2 pts/hr markers ok; 2 pts/time correct]

- 3. **What were the five objects I asked you to remember?**
[1 pt/ea]

- 4. **I'm going to tell you a story. Please listen carefully because afterwards, I'm going to ask you about it.**

Jill was a very successful stockbroker. She made a lot of money on the stock market. She then met Jack, a devastatingly handsome man. She married him and had three children. They lived in Chicago. She then stopped work and stayed at home to bring up her children. When they were teenagers, she went back to work. She and Jack lived happily ever after.

What state did she live in? [1 pt]

SCORING

- 8-10..... **Normal**
- 6-7..... **Mild Cognitive Impairment**
- 0-5..... **Dementia**

Vision

“Do you have difficulty driving, or watching television, or reading, or doing any of your daily activities because of your eyesight?”

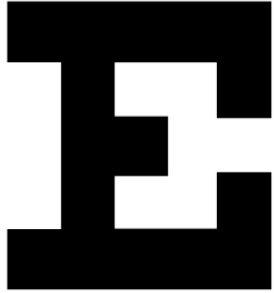









If yes:

Test each eye with Snellen Chart

Test each eye for Reading Glasses

Ophthalmology Referral

(Cataract, Glaucoma and Age-Related Eye Changes)

	1	20/200
	2	20/100
	3	20/70
	4	20/50
	5	20/40
	6	20/30
		
	7	20/25
	8	20/20
		

Hearing

“Have you ever been embarrassed about your hearing?”

Do you have trouble hearing whispers?

Do you have trouble hearing at the movies, in theaters, or at religious functions?

Does your hearing lead to arguments with your family?

Do you have trouble hearing particular voices among all the ‘hubhub’ in restaurants?”

If yes; Refer to ENT Specialist

Administer the whispered voice test

Test hearing with Audioscope



Clinical Frailty Scale

Shown to predict death and need for institution

1 **Very Fit**
Robust, active, energetic, well motivated and fit. These people commonly exercise regularly and are in the most fit group for their age.



2 **Well**
Without active disease symptoms, but less fit than people in category 1. Exercise often or very active occasionally (e.g. seasonally).



3 **Managing Well**
Well treated comorbid disease and symptoms are well controlled. Not regularly active beyond routine walking.



4 **Vulnerable**
Not dependent on others for daily help, but symptoms limit activities. Commonly complain of being "slowed up" and/or tired during the day.



5 **Mildly Frail**
More evident slowing and need help with high order IADLs (finances, transportation, heavy housekeeping and medication). Mild frailty progressively impairs shopping, walking alone outside, meal prep and housework.



6 **Moderately Frail**
Need help with all outside activities and housekeeping. Often have problems with stairs, bathing and may need minimal assistance with dressing (cuing, standby).



7 **Severely Frail**
Completely dependent on others for the activities of daily living, (physical or cognitive). Seem stable and not at high risk of dying (6 months).



8 **Very Severely Frail**
Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.



9 **Terminally Ill**
Approaching the end of life. This category applies to people with a life expectancy of <6 months who are not otherwise evidently frail.



FALLS

- 20-30% of seniors experience one or more falls each year.
- Equally common between men and women, but more likely to result in injury in women
- Falls are the leading cause of injury among older Canadians. > 1/3 of people over 65 years
- 50% of all falls causing hospitalization happen at home.
- Associated with serious injury such as hip fracture, subdural hematoma, or head injury.
- Falls are the cause of 85% of seniors' injury-related hospitalizations.
- Falls are the cause of 95% of all hip-fractures.
- Many are preventable. Interventions that prevent falls and their sequelae delay or reduce the frequency of nursing home admissions

<https://www.canada.ca/en/public-health/services/health-promotion/aging-seniors>

Extrinsic Factors (Environment)

Accidents

Environments (light, loose rugs, slip and fall)

Medications (including sleeping pills)

Neuroleptic

Psychiatric Medications

Alcohol

Intrinsic Factors (Diseases)

Orthostatic / Syncope (30%)

Arthritis / Musculoskeletal/Muscle strength

Vision (acuity <20/60, cataracts, depth perception)

Depression/Cortical function/Cognition

Dizziness/Vertigo

Gait disturbances/Ataxia/Balance

Fall Prevention

- Multidisciplinary, multifactorial, health and environment risk factor screening and intervention programs in the community
- Muscle strengthening, balance and group exercise programs
- Hazard assessment and modification (remove loose rugs, loose wires add shower bars, slip resistant mats, staircase, night lights, safe staircase)
- Vitamin D 1000 IU and Calcium 1500 mgs daily
- Tapering or gradually discontinuation of psychotropic medication
- Manage hypotension, heart rate, and rhythm abnormalities
- Eyesight and footwear optimization

Resources

Contact

1- 877-651-3755

info@csep.ca

101-495 Richmond Rd Ottawa (Ontario) K2A 4B1

<https://www.csepguidelines.ca>

Division of Seniors and Healthy Development

Public Health Agency of Canada

Telephone: 1 800 O-Canada

(1-800-622-6232)

TDD/TTY: 1-800-926-9105

www.publichealth.gc.ca/seniors

<https://www.canada.ca/en/services/health>

<https://www.canada.ca/en/public-health/services/health-promotion/aging-seniors>

Thank You

Dr. Shakeel Ahmed

drshakeelahmed@hotmail.com

