



National
Aboriginal
Diabetes
Association

Cholesterol and Diabetes

An Introduction

National Aboriginal Diabetes Association

- ▶ NADA envisions diabetes free people.
 - To achieve this vision NADA is a prominent organization that is the driving force in:
 - Raising awareness about Diabetes and Aboriginal Peoples
 - Advocating for programs and services for Aboriginal Peoples affected by Diabetes
 - Promoting healthy lifestyles to prevent the onset or complications of Diabetes for all Aboriginal Peoples
- ▶ This presentation is offered as educational information and shall not be used as a substitute for seeking medical advice. For more information, see your medical practitioner.

Cholesterol

- ▶ Outline
 - Definitions
 - Cholesterol levels and Targets
 - Diet/ Nutrition
 - Heart disease
 - Lifestyle
 - Resources



What is Cholesterol?

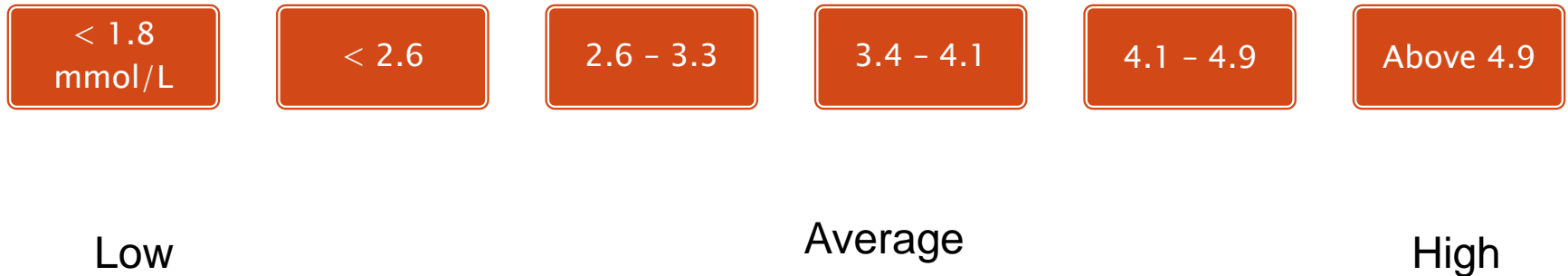
- ▶ Cholesterol is a waxy substance that is found in the fats (lipids) in your blood.
 - Cholesterol is naturally occurring in the body.
 - Cholesterol is important in building cell membrane and hormones
 - Additional cholesterol comes in the form of food intake
 - It becomes a problem when there is too much cholesterol in the body

Definitions

- ▶ LDL – or “lousy” “bad” cholesterol carries cholesterol particles throughout your body. LDL cholesterol builds up in the walls of your arteries, making them hard and narrow.
- ▶ HDL – or “happy” “good” cholesterol picks up excess cholesterol and takes it back to your liver

Cholesterol Levels – LDL ,

measured in mmol/L, lowest to highest



Cholesterol Levels – HDL,

measured in mmol/L, lowest to highest

< 1 (men) and
1.3 (women)

POOR

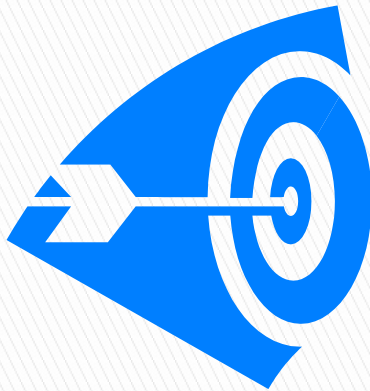
< 1.3 – 1.5

BETTER

Above 1.5

BEST

Targets



- ▶ Most people should aim for an LDL level below 3.4 mmol/L
- ▶ Lower if you are at a higher risk of heart disease (1.8mmol/L)

Diet and Other Things

- ▶ Diet can play an important role in lowering your cholesterol
 - Soluble fibre
 - Omega-3 fatty acids
 - Nuts
 - Olive Oil
 - Saturated and Trans fats



Soluble Fibre

Soluble Fibre

- ▶ <https://www.youtube.com/watch?v=1PI10SEef8>.

Females	Adequate Intake (AI)
9 – 18	26 g/day
19 – 50	25 g /day
51 – 70+	21 g/day

Recommended Daily Intake



Oatmeal and Banana

List of Foods High In Fibre

▶ Heart & Stroke

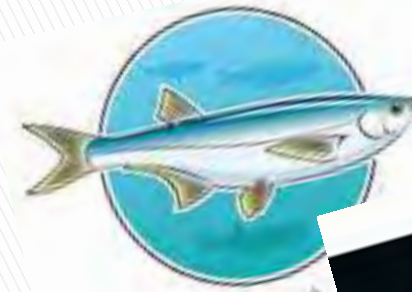
- ▶ http://www.heartandstroke.com/site/c.iklQLcMWJtE/b.3928885/k.8459/Top_10_highfibre_food_list.htm.

- ▶ Choose a fibre-rich cereal. Choose a cereal that has at least 4 g of fibre per serving.
- ▶ Eat more fruit. Have fruit for a snack or dessert and limit your intake of fruit juice. Don't forget to eat the skin on fruits such as apples and pears. That is where most of the fibre is.
- ▶ Add one more vegetable to your diet today. Vegetables are low in calories and a good source of fibre and nutrition.
- ▶ Add beans or lentils to your tossed salad, spaghetti sauce or soups.
- ▶ Substitute half the white flour for whole wheat flour in your favourite recipes.

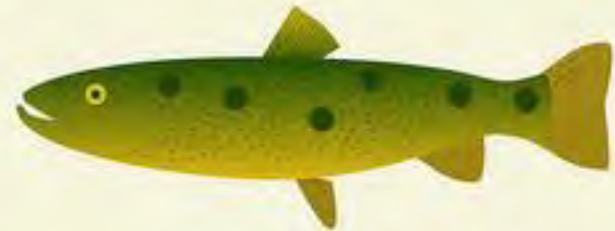
Some Suggestions

Omega-3 Fatty Acids

- ▶ Eating fatty fish can be heart healthy because of its high levels of omega-3 fatty acids, which can reduce your blood pressure and risk of developing blood clots.
- ▶ 2 servings per week, approx. 75 grams each



shutterstock - 1004

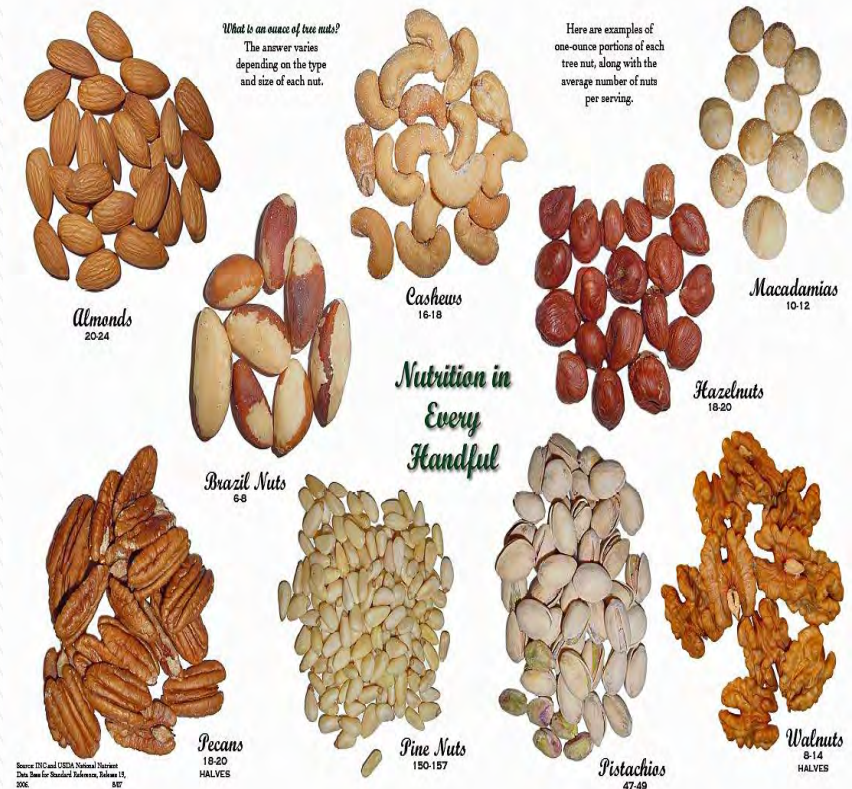


Fishing bananas Trout

Mackerel, Lake Trout,
Herring

Nuts

- ▶ Walnuts almonds and other nuts can reduce blood cholesterol
- ▶ A handful
- ▶ Most nuts, such as: almonds, hazelnuts, peanuts, pecans, pistachio nuts and walnuts, may reduce your risk of heart disease



1.5 oz or 42.5 gr/day

Olive Oil

- ▶ Contains antioxidants that can lower your “lousy”, “bad” (LDL) cholesterol but leave your “happy”, “good” (HDL) cholesterol untouched



2 tbsp or 23 gr/day

Greater cholesterol-lowering effects

Plant Sterols

- ▶ Plant sterols are substances naturally found in plant-based foods. They are naturally found in many foods, such as; fruits, veges, nuts and grains, and in vegetable oils like sunflower, safflower and canola oils.
- ▶ Plant sterols helping to remove cholesterol from the body, by partially blocking its absorption in to the bloodstream. The cholesterol that is not absorbed is eliminated from the body.



Eating more vegetables

Fruits & Vegetables

Food Labels

- ▶ Read the nutrition facts
 1. Serving Size
 2. % Daily Value.
Choose foods with a lower DV of Fat and higher DV of fibre.
 3. Fat
 4. 4 Cholesterol
 5. Fibre
 6. Vitamins and Minerals
- ▶ Video 5, Daily Value:
[http://www.eatrightontario.ca/en/Videos/Nutrition-
Labelling.aspx](http://www.eatrightontario.ca/en/Videos/Nutrition-Labelling.aspx).

Comparing Daily Value

Food Label and Daily Value



Nutrition Facts	
Serving Size 125g	
Amount Per Serving	
Calories 65	Calories from Fat 2
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat	
Cholesterol 0mg	0%
Sodium 1mg	0%
Total Carbohydrate 17g	6%
Dietary Fiber 3g	12%
Sugars 13g	
Protein 0g	
Vitamin A 1%	Vitamin C 10%
Calcium 1%	Iron 1%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	
NutritionData.com	

What is ‘a little or a lot’?

Sample Food Label

Heart Disease

▶ If you:

- Have had a previous heart attack or stroke
- Have artery blockages in your neck, arms or legs
- Have known Diabetes that requires treatment

High Risk

▶ Two or more of the following will put you in the high risk category:

- Smoking
- High blood pressure
- Low HDL “happy”, “good” cholesterol
- Family history of early heart disease
- Man > 45 or Woman > 55

Factors

Life Style

- ▶ Lifestyle changes are essential to improve your cholesterol level.
 - Lose extra pounds
 - Eat heart healthy foods
 - Choose healthier fats
 - Eliminate Trans-fats
 - Limit your dietary cholesterol (200 – 300 mg/day)
 - Select whole grains
 - Stock up on fruits and vegetables
 - Eat heart=healthy fish
 - Drink alcohol in moderation
- ▶ Exercise regularly
 - Discuss with your medical practitioner before ensuing a fitness routine
 - Build up your endurance, stamina
 - Move every day
- ▶ Don't Smoke

Diet

Movement

Videos

- ▶ <http://www.mhp.gov.on.ca/en/active-living/videos/default.asp>.
 - ▶ Example: Senior Fitness
 - ▶ <http://www.mhp.gov.on.ca/en/active-living/videos/senior.asp>.
-
- ▶ Physical Activity

Youtube Video – Cholesterol

- ▶ Foods high in Cholesterol:
- ▶ <https://www.youtube.com/watch?v=ICsc7C5gL5c>.
- ▶ Foods that help lower Cholesterol: (no music)
- ▶ https://www.youtube.com/watch?v=wC4zpE_AS78

Resources

- ▶ <http://nutritiondata.self.com/>. Resources, check your BMI and nutritional needs. Interactive website.
- ▶ <http://www.eatrightontario.ca/>.
 - EatRight Ontario wants to help you improve your health and quality of life through healthy eating. This service provides easy-to-use nutrition information to help you make healthier food choices.
- ▶ <http://nourishmovethrive.ca/>.
 - Nutrition articles, self-assessment, recipes.

References

- ▶ Mayo Clinic, Diseases and Conditions.
<http://www.mayoclinic.org/diseases-conditions/high-blood-cholesterol/basics/symptoms/con-20020865>.
- ▶ Becel. Cholesterol and You.
<http://www.becel.ca/en/proactiv/helpingtoloweryourcholesterol/plant-sterols-101.aspx>.
- ▶ Reading Nutrition Labels. Eat Right Ontario.
<http://www.eatrightontario.ca/en/default.aspx>.
- ▶ Health Canada. Dietary Reference Intake Table.
www.hc-sc.gc.ca.