



Heart Disease: The Bad News

Atherosclerosis, or
"hardening of the arteries"
is the leading cause of death in Canada

1. Coronary heart disease → heart attacks
2. Strokes
3. Peripheral vascular disease → poor blood flow to legs

Heart Disease Prevention: The GOOD News

Most heart disease is PREVENTABLE; we already know most of the causes

By doing things to reduce your risk of heart disease, you also reduce your risk for:


- Diabetes
- High blood pressure
- Overweight/Obesity
- Lung Disease
- Kidney Disease
- Arthritis
- Cancers



Major risk factors for heart disease

Non-modifiable, or things you can't do anything about

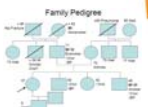
- AGE
- GENDER
- FAMILY HISTORY
- ETHNIC ORIGIN
- PREVIOUS HEART ATTACK OR STROKE



Family History: What matters most for heart disease prediction?

Parent or sibling with evidence of heart disease or stroke before age 60

- symptoms alone are enough



Diabetes (Type 2 – Adult onset) also runs in families

Parent or sibling with type 2 diabetes increases your risk of getting it to 50%

Major risk factors for heart disease: Modifiable



- Bad cholesterol/good cholesterol ratio
- Smoking
- Psychosocial Stress
- Diabetes
- High blood pressure
- Abdominal obesity

Cholesterol and heart disease



- LDL: The "Bad"
Delivers cholesterol to arteries
- HDL: The "Good"
Helps remove cholesterol from arteries
- When is high cholesterol not just your fault?
Total cholesterol > 6.5
LDL-C > 4.5
Triglycerides > 3
HDL-C < 0.7

Smoking



- Constricts blood vessels → reduces blood flow to tissues
- Damages lining of arteries → initiates atherosclerosis process, blood clotting
- Risk to blood flow and blood vessels reduced very quickly upon stopping

Psychosocial Stress



Major risk factor; hard to quantitate
Increased cortisol, adrenaline levels with stress correlated with increased damage to blood vessels
Stress reduction is a major factor in reducing heart disease risk

Diabetes



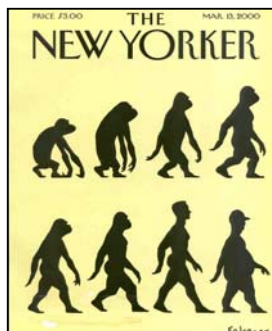
Diabetics have a 2-4-fold increased risk of heart attacks, and have a higher death rate when they have one
Alterations in cholesterol particles-, particularly small dense LDL, thought to explain a lot of this risk
Very tight blood sugar control doesn't seem to lower heart attack rates, but does reduce eye, kidney and nerve damage

High blood pressure



High blood pressure damages the lining of blood vessels and leads to arterial wall thickening; heart has to pump against higher pressure
Blood pressure reduction by reducing salt intake, exercising more, losing weight, or medication all reduce risk of death from heart attack and stroke

The Evolution of Man



Abdominal Obesity



"Gut" or visceral fat is more dangerous than other fat

Increased rate of heart disease as well as diabetes with more abdominal fat

Increased abdominal fat a part of the Metabolic Syndrome; associated with insulin resistance and fatty liver

Ways to avoid heart disease: A Healthy Diet



5+ fruit and vegetable servings per day by itself predicts MAJOR protection against heart disease

Spread food out well throughout day; don't skip meals

Eat more calories early and less in evening

Limit red meat, baked goods, too much fat

Ways to avoid heart disease (and diabetes): Daily exercise



Exercise, even regular walking, reduces blood pressure, reduces blood sugar, reduces cholesterol, can reduce weight, and makes you feel better



DAILY exercise is the number one way to prevent progression from high blood sugar to actual diabetes



30 minutes, or 15 minutes twice, is great; more if you can do it

Summary: Preventing heart disease



We already know what causes heart disease:

High bad cholesterol, low good cholesterol, smoking, stress, diabetes, high blood pressure, abdominal obesity, low exercise level and unhealthy diet explain > 90% of risk for heart disease

These are all things we can do something about

Raising HDL



- Aerobic Exercise
- Quitting Smoking
- Losing weight
- Good blood sugar control
- Niacin

Increasing HDL formation: Research in the Francis lab



Protein therapy to turn on HDL formation
Increasing the pump that makes HDL
Removing more cholesterol from arteries by
turning on HDL formation

The Healthy Heart Program Prevention Clinic



Unique Provincial resource for the
comprehensive assessment and
management of all major coronary risk
factors

Located at St. Paul's Hospital

Referral by family physician preferred

Heart disease prevention is disease prevention!



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disease also reduces your risk for**

- Diabetes
- High blood pressure
- Obesity
- Lung disease
- Kidney disease
- Arthritis
- Cancers

A large, stylized flower graphic with multiple layers of petals in various colors including yellow, orange, red, pink, purple, and green, positioned on the left side of the slide.

Thank you

