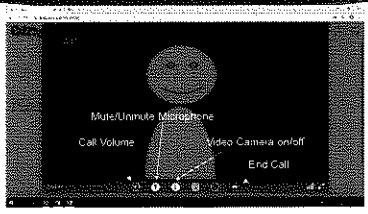
Cardiac Wellness Centre
Heart Health Education Lecture

Consent to Participate

- Privacy – no other parties are watching
- This session is not being recorded
- There may be a sound delay
- You have the right to refuse to participate

OTN Instructions

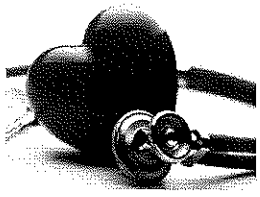


OTN Instructions

- Please mute your microphone
- Write down your questions and save them until the end
- Please call with feedback or questions!

  519-257-5111 x72510

- Part One: Common Cardiovascular Diseases
- Part Two: Risk Factors for heart disease

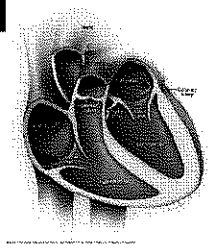


Part One: What is Cardiovascular Disease?

- 1.3 million Canadians living with heart disease
- A group of conditions affecting the structure and functions of the heart or blood vessels
- Examples include: Valve disease, Heart muscle disease (cardiomyopathy and CHF), Coronary artery disease

Valve Disease

- 4 valves that keep blood flowing in a forward direction (tricuspid, pulmonic, aortic, mitral)
- Can become damaged or diseased
- Regurgitation: valve flaps don't close properly, blood leaks backward
- Stenosis : Valve flaps become stiff or thick, resulting in narrowed opening and less blood flow



Symptoms: Heart murmur, fatigue, shortness of breath, swelling in ankles or feet, irregular heartbeat, dizziness

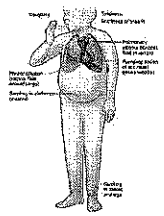
Treatment: Valve Repair (preserve patient's valve) or Replacement (mechanical or tissue valve)

Heart Failure/Cardiomyopathy

-Condition in which the heart muscle is unable to pump blood sufficiently to meet the body's needs

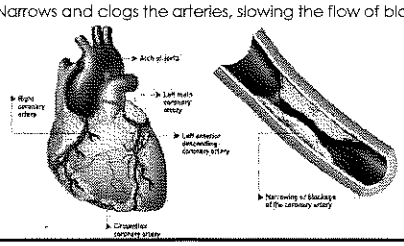
-Causes include previous MI, hypertension, arrhythmias , excess alcohol use, cardiomyopathy
-Symptoms: Shortness of breath, fatigue, weakness, swelling, reduced exercise ability, cough

-Treatment: Lifestyle changes (weight loss, dietary improvement, exercise, smoking cessation) and Medications



Coronary Artery Disease

- Most common form of heart disease. Arteries in the heart are blocked, Over many years, plaque builds up on artery walls.
- Narrows and clogs the arteries, slowing the flow of blood.

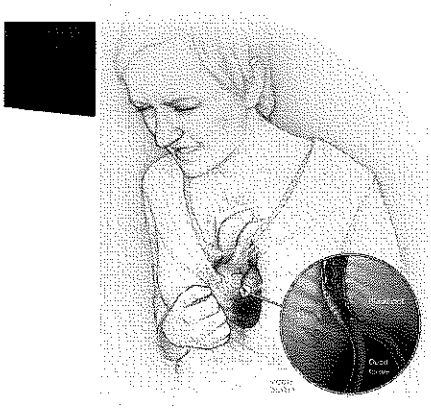


Complications of Coronary Artery Disase

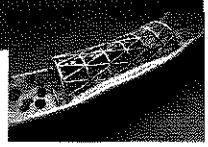
Angina (chest pain) if the heart does not have enough oxygen

Heart attack if the heart does not get any oxygen at all. During a heart attack, some of the heart muscle can die from a lack of oxygen.

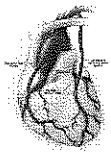
Coronary Thrombosis - plaque in an artery can rupture. The body's repair system in turn creates a blood clot to heal the wound. The clot, however, can block the artery, leading to either a heart attack or stroke.



Treatment for Coronary Artery Disease



1. Angioplasty (PCI)
   - Catheter inserted into blood vessel to access arteries inside heart. Stent inserted into the artery to open artery and allow blood flow
2. Bypass Surgery (Coronary artery bypass graft)
   - Blood vessels from body inserted into the heart to provide detour for blood around the blockage



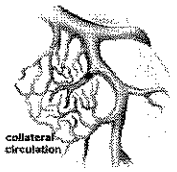
Treatment for Coronary Artery Disease

3. Medications
   - Treat individual conditions such as high blood pressure or high cholesterol
   - Protect heart and prevent progression of disease

4. Manage Risk Factors!
   - Treat the root cause
   - Lifestyle approach
   - Identify individual risk factors

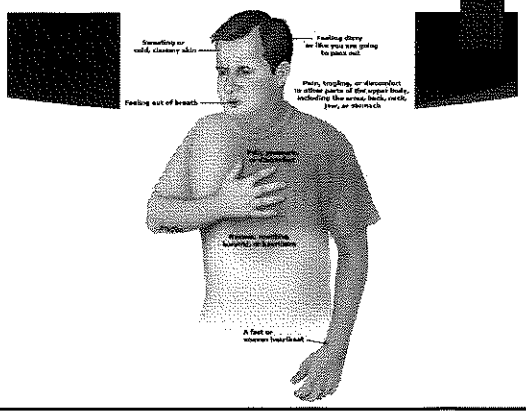
Collateral Circulation

- Re-routing of blood around a blocked artery.
- Can bypass a blockage in main artery and supply enough oxygenated blood to enable the cardiac tissue to survive and recover.
- Can prevent heart attack and cardiac death



Heart Disease Symptoms

- Signs and symptoms of heart disease can develop slowly over time, or occur abruptly



Part Two:

Risk Factors for Heart Disease

Nine in ten Canadians (24 million) have at least one risk factor for heart disease and stroke

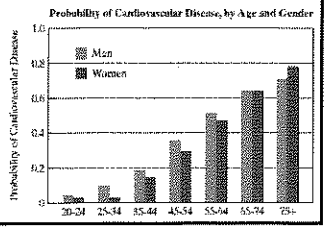
Risk factors can be non modifiable or modifiable

Age (nonmodifiable)

- Heart disease risk increases with age
- 4 out of 5 people with heart disease are over 65
- Changes in blood vessels (reduced flexibility), increased plaque, changes in nutrition / exercise, increased blood pressure, and diabetes rates

Gender –(nonmodifiable)

- Men have a greater lifetime risk of heart disease and presents at an earlier age
- Gap narrows after age 65, women outnumber after age 75



Females and Heart Disease

- Less typical symptoms and more complications
- Higher mortality
- Menopause: Hormones (endogenous estrogens) are protective
- Before menopause, heart disease risk low
- Estrogens have regulating effects on lipids, inflammatory markers and coagulation and promote vasodilation

Family History (nonmodifiable)

- Increases cardiac risk
- Immediate family members most predictive, specifically early onset heart disease (before 65 years)
- Focus on lifestyle !
- Good news: we can influence our genes!

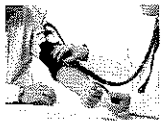
Smoking

- Smoking is the most common modifiable risk factor for cardiovascular disease
- 16% of Canadians smoke
- Most significant contributor to premature death
- Damages lining of arteries, predisposes to plaque buildup, increases BP
- Benefits of quitting begin immediately
- Methods to help quit – Medications (champix , zyban) , nicotine replacement, Community Programs (Health Unit)

Blood Pressure

Six million Canadian adults, or one in five, have high blood pressure

1 in 6 Canadians (762,000 individuals) with high blood pressure are unaware of their condition



Blood pressure is MODIFIABLE!

How do we lower blood pressure?

- ✓ Lose weight if needed
- ✓ Reduce stress level
- ✓ Dietary changes
- ✓ Regular Exercise
- ✓ Reduce alcohol intake
- ✓ Smoking cessation
- ✓ Medications

Cholesterol

What is cholesterol?

- Cholesterol is a waxy, fat-like substance found in your body and in many foods.
- The majority (80%) of blood cholesterol comes from the liver converting fats to cholesterol.
- Too much cholesterol can build up on your coronary arteries which leads to narrowing. This allows less blood to pass through.

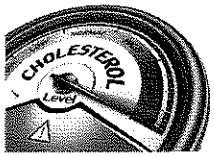
Cholesterol

LDL (bad cholesterol) -less than 1.8 mmol/L

HDL (good cholesterol) -greater than 1.0 mmol/L

Triglycerides - less than 1.7 mmol/L

Non HDL Chol - less than 2.6



Cholesterol level is MODIFIABLE!

How do we lower cholesterol?

- ✓ Weight loss
- ✓ Avoid trans/saturated fats
- ✓ Exercise
- ✓ Smoking cessation
- ✓ Reduce alcohol intake
- ✓ Medications

* Bring up the HDL with exercise!

Physical Inactivity

- Only 15% of adults (17% of men and 14% of women), accumulate the recommended 150 minutes per week of moderate- to vigorous-intensity physical activity
- Being inactive DOUBLES your risk of heart disease!

Obesity

- 62%, or over 3 in 5 of Canadian adults are overweight or obese
- Defined as Body mass index (BMI) of 30 or greater
- Prevalence of diabetes, hypertension, and heart disease increased with increased BMI

Central Obesity

- With an increase in waist circumference the risk of death increases even with normal BMI.
- Strong correlation between central obesity (spare tire) and cardiovascular disease, diabetes, high cholesterol, high blood pressure
- Immune response in fat results in chronic inflammation
- Target Waist circumference:

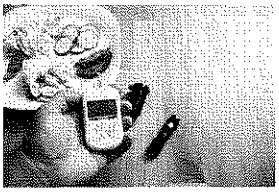
  Women – 88cm (35") Men – 102cm (40")

Physical Activity level and Weight is MODIFIABLE!

- Move your body!
- Reduce calorie rich/nutrient poor foods
- Aim for AT LEAST 150 minutes per week.
- Twice a week here at Cardiac Wellness but additional sessions at home.
- Regular exercise can cut your risk of heart disease in half
- Develop realistic weight loss goals

Diabetes

Diabetes rates in Canada have almost doubled within the past decade. It is estimated that the prevalence of Canadians with diabetes is 3.4 million (9.3%).



- Diabetes is a chronic disease in which the body has trouble producing or using insulin.
- The role of insulin is to regulate blood sugar in the bloodstream
- Too much sugar can cause damage to organs, blood vessels, and nerves
- Sugar is also used as an energy source
- Type 1 – autoimmune, body cannot produce enough or any insulin
- Type 2 – 90% of cases. Body cannot use insulin efficiently

Control of diabetes is MODIFIABLE!

- ✓ Monitor your blood glucose
- ✓ Maintain your target blood sugar levels
- ✓ Exercise
- ✓ Aim for a healthy body weight
- ✓ Manage your stress
- ✓ Take your diabetic medications/insulin as prescribed
- ✓ See our dietician

Stress and Mental Health

What can stress do to your heart?

Fight or flight response – leads to flood of chemicals such as cortisol and epinephrine

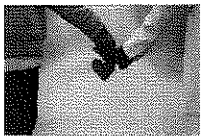
- Increase in your blood pressure
- May increase cholesterol levels
- May increase blood platelet action causing premature clotting
- Leads to unhealthy behaviours such as overeating, smoking, or sleep disturbances

Mental Health

- Two way relationship between heart disease and depression.
- Existing depression correlated with higher rates of heart disease
- Diagnosis of heart disease can increase depression risk

Our reaction to stress is MODIFIABLE!

- We cannot always limit stressors but we can change how we react to stress in our lives!
- Surround yourself with a positive support system.
- Formal support if needed



Why Cardiac Wellness?

Participation in a cardiac rehabilitation program, after being hospitalized for heart disease (heart attack, angina, heart failure or arrhythmia), is associated with a 50% reduction in death rate

Cardiac rehabilitation exercise training increases stamina and strength, and promotes recovery
Overcome anxieties and fears

Make heart healthy living a part of your life

Questions?

Please unmute your mic if you have any questions at all