

Windsor-Essex Cardiac Wellness Centre

The Path to a Better Heart: **EXERCISE**

Fun Facts

- Metabolism slows down 90% after 30 minutes of sitting
- Good cholesterol (HDL) drops 20% after 2 hours of sitting
- Sedentary workers have 2x the risk of developing diabetes and heart disease and 13% risk of developing cancer
- Experts encouraged you to stand up at least 2 hours per day

Why is exercise so important in heart disease?

Exercise can help reduce or eliminate the following heart hazards:

- High blood pressure
- Cholesterol
- High levels of triglycerides
- Diabetes
- Smoking
- Obesity

Exercise and Blood Pressure

- Regular exercise is associated with lower blood pressure
- Also lowers the risk of damaging the walls that could lead to cholesterol build up

Exercise and Cholesterol

- Best way to increase HDL (good chol)
- Exercise also helps reduce triglyceride levels.

↑ triglycerides and ↓ HDL cholesterol = ↑ risk of coronary artery disease

Exercise and Diabetes

- Exercise can help ↓ high blood glucose because working muscles will use blood glucose as fuel

↓ blood glucose will therefore ↓ insulin requirements

- Not diabetic? People at their ideal weight are much less likely to develop diabetes

Exercise Strengthens the Heart

Exercise can

- Increase Left Ventricular function
- Increase efficiency
- Increase collateral circulation

Other Exercise Benefits

- Increases lung function
- Reduces the effects of osteoporosis
- Decreases risk of certain cancers
- May reduce your dependency for certain medications

Smoking

- Nicotine constricts blood vessels
- Thickens the blood making it difficult to carry oxygenated blood to the body
- Increase heart rate and blood pressure (stimulant) therefore making the heart work harder

- Decreases HDL and increases LDL and Triglycerides
- Disturbs normal heart rhythm
- Damages arterial walls making them stiffer (less elastic)

On a lighter note....

- Smokers who exercise vigorously and regularly are more likely to cut down or stop smoking.

Exercise & Obesity

- If you're a man and your waist measures greater than 102 cm (40 inches) or a woman more than 88 cm (35 inches) you are at increased risk of developing health problems such as heart disease, high blood pressure and heart disease. This is known as central obesity.
- Exercise can help people lose excess fat or stay at a healthy body weight.

Energy Balance Equation

- To lose one pound of body weight you need to get rid of 3500 calories per week (that equals 500 calories per day)
- Therefore if you: decrease your caloric intake by 250 daily (through healthier food choices) and increase your caloric expenditure 250 daily (by exercise and daily activities) ***this will equal 500 calories per day!!***
- Adherence to long term exercise will train the body to use fat as a fuel source

Weight loss tips

- Aim to lose 0.5 to 2lbs per week
- Increase your daily activities
- Make it a lifestyle change!

Do you know how to get FITT?

F-Frequency

I -Intensity

T-Time

T-Type

Frequency

- To increase the benefits the activity must be regular

Intensity

Pulse

- Best place to find pulse is on your wrist
- Count the number of beats for 10 seconds
- Determine if you are in your heart rate zone

Talk Test

- “If you can’t talk then don’t walk” (or slow down)
- If the oxygen supply does not meet the demand during exercise; you will have difficult time breathing and thus have difficulty talking

MET level (*work level*)

- A measurement of how much oxygen is needed to perform an activity.

- Determined during your treadmill stress test.
- Guideline only...

RPE

- 10-point scale
- “Overall, how hard was your workout?” “How much effort are you putting forth during exercise?”
- Allows you to monitor symptoms
- Aim for an RPE = 3-5 during exercise

Time

- Canadian guidelines state all persons over 18 years of age should strive to accumulate a minimum of 150 minutes of cardiovascular exercise per week.

Type

- Any activity can count for this
- Choose exercises that utilize large muscle groups

The Three Activity Groups

- Endurance
 - Helps your heart, lungs and circulatory system stay healthy and can give you more energyExamples: walking, cycling, continuous swimming
- Strength
 - Helps your muscles and bones stay strong
 - Targets specific muscle groupsExamples: weight training, dyna bands, body weight
- Flexibility
 - Keeps muscles loose and flexible

- Increase range of motion
 - Prevents injury
- Examples: stretching exercises, yoga, Qigong

Safety

Avoid...

- Pulling, pushing, lifting heavy objects for 6-8 weeks.
- prolonged overhead reaching
- Extreme temperatures:
- Hot temperatures > 90 degrees
- humid conditions
- saunas, hot tubs, hot showers
- Cold temperatures < 35 degrees - significant wind chill
- holding your breath for long periods
- crossing your legs, which decreases circulation
- poorly ventilated, smoky or polluted areas
- anxiety or stressful situations
- exercising after eating a big meal (1-2 hours)
- never use nitro to finish your exercise program

Stay Alert

Stop the activity if

- discomfort in the chest, arms, neck, shoulders, back or jaw
- fainting or lightheaded spells
- excessive shortness of breath
- irregular pulse
- changes in symptoms

Keys to Success

- Try to make exercise a routine part of your day.
Encourage family or friends to join you!
- Keep a log book
- Set realistic goals
- Have alternative plans if weather is bad

- Do it because you want to not because you have to! Have fun!

Exercise As Medicine

If one pill had all of these benefits would you take it?

Generic Name	<ul style="list-style-type: none"> • Physical Activity • Other Brand Names: jogging, hiking, swimming, walking, tennis, basketball, soccer, dancing, gardening, etc.
Indication and Uses	<ul style="list-style-type: none"> • Prevent obesity and reduce its risks • Reduce incidence and improve management of diabetes • Prevent and treat heart disease • Lower risk of cancer • Treat High blood pressure • Increase HDL-C and decrease TG • Prevent osteoporosis and fractures • Manage depression and anxiety • Reduce risk of dementia • Increase lung function • Decrease risk of premature mortality • Increase left ventricular function • Produce collateral circulation
Administration	<ul style="list-style-type: none"> • Self administer or with others • Start off slowly, and increase dosage PRN (as needed) • Change formulation to improve compliance • Take any time of day
Dosage	<ul style="list-style-type: none"> • 30 minutes per day in adults and up to 60 minutes each day in children. Benefits are seen at even low doses.

	Start with low dose therapy and increase as tolerated.
Side Effects	<ul style="list-style-type: none">• Decreased blood pressure, pulse and blood sugar• Stronger muscles and bones• Weight loss• Improved mood, confidence, self esteem, and concentration• Improved bowel and sleep habits
Adverse Effects	<ul style="list-style-type: none">• may include sweating, injury with overdose