



STAYING ACTIVE

IN SPITE OF HEALTH CHALLENGES

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Two Types of Exercise

Aerobic Exercise

- Walking
- Swimming
- Cycling
- Dancing

Anaerobic Exercise

- Resistance Training
- High Intensity Intervals (HIIT)
- Plyometrics
- Sprinting



Benefits of Aerobic Exercise



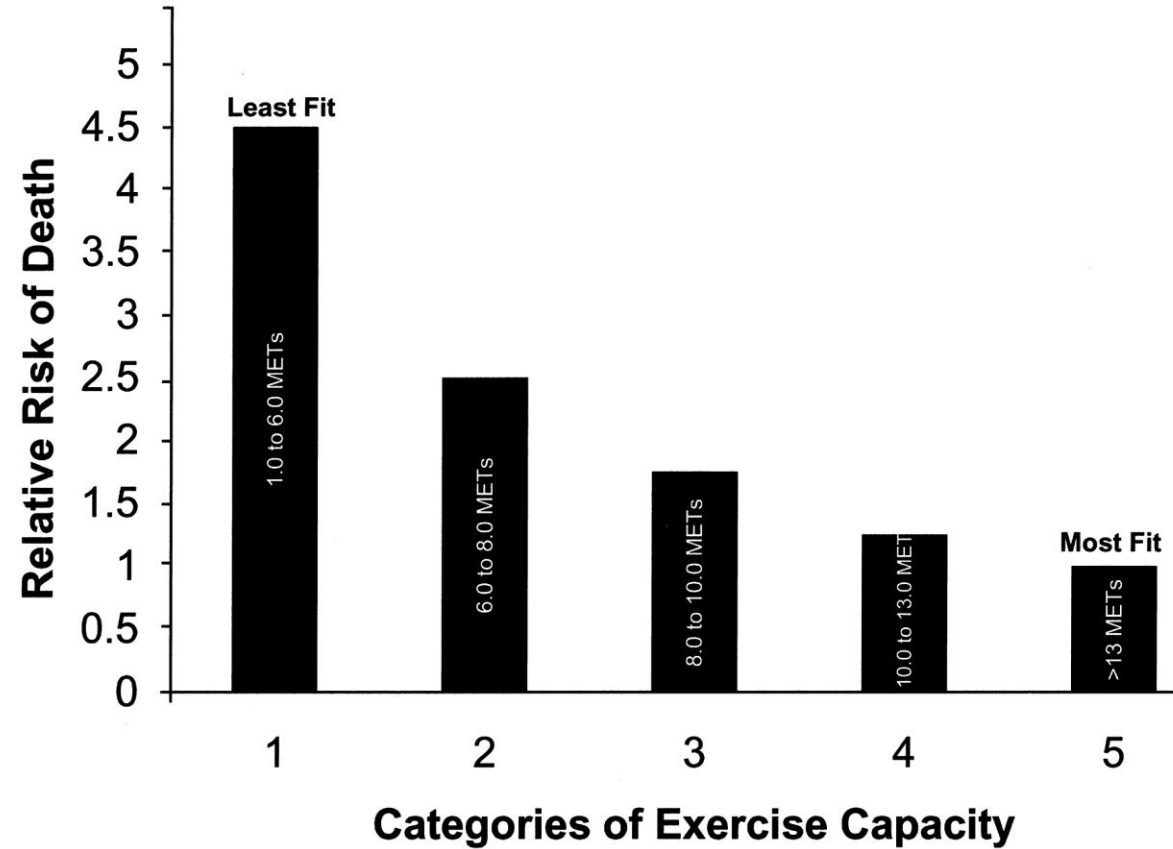
- Weight Control
- Maintain/Increase Stamina, Fitness, Strength
- Reduce Health Risks of Chronic Conditions
- Improve Immune System Function
- Improve Mental Health
- Maintain Independence

Benefits of Anaerobic Exercise

- Maintains/Builds Muscle
- Strengthens Bones
- Increases VO2



Harvard Alumni Study



So what is needed to be healthy?



A well-balanced exercise program that includes the following will give you all the health benefits we spoke of previously...

Aerobic exercise for health



- Moderate (walking) to vigorous (jogging) activity for at least 150 minutes BUT no more than 300 minutes
- Heart rate should be elevated and a light sweat happening but you should not be overly breathless

Anaerobic Exercise – Resistance Training

- 8-10 exercises that work all the major muscle groups
- 1-2 sets of 10-15 reps
- 2x/week
- Do not need to lift to point of muscle failure



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Balance & Stretching Exercises



- Exercises and/or movements that work your joints in a full range of motion to maintain flexibility
- Activities that help maintain balance

Maximize Active Living!

- Minimize screen time - <3hrs/day
- Walk or cycle short distances
- Stand and walk for 5 minutes every 30 minutes if seated for prolonged periods



But what about my health issue?



Good news – exercise is safe and effective in spite of most health challenges ***BUT*** always check with your doctor before beginning a program

Let's talk about:

Arthritis

Diabetes

Osteoporosis

Anxiety/depression

Arthritis

- **American College of Sports Medicine**
 - Moderately intense cardiovascular exercise 30 min/day 5 days/week or undertake vigorously intense cardiovascular exercise 20 mins/ day 3 days/week
 - eight to 10 strength-training exercises (8 to 12 reps of each exercise) 2x/ week



Exercise and Knee OA



- Exercise recommendations:
 - Any type of resistance training of the lower extremities, especially quadriceps
 - High intensity resistance exercises are more effective than low intensity
 - Aerobic training
 - Diet modification for weight loss

Exercise and Hip OA

- Exercise recommendations:
 - Hip musculature and core strengthening
 - Gait retraining
 - Stretching and ROM exercises



Low back pain



- May be due to degenerative disc disease, osteoarthritis of the facet joints, and/or mechanical issues
- Exercise recommendations:
 - Lower extremity and core strengthening
 - Lumbar ROM and flexibility
 - Aerobic activity
 - Education regarding posture and positioning

Arthritis and MSK issues

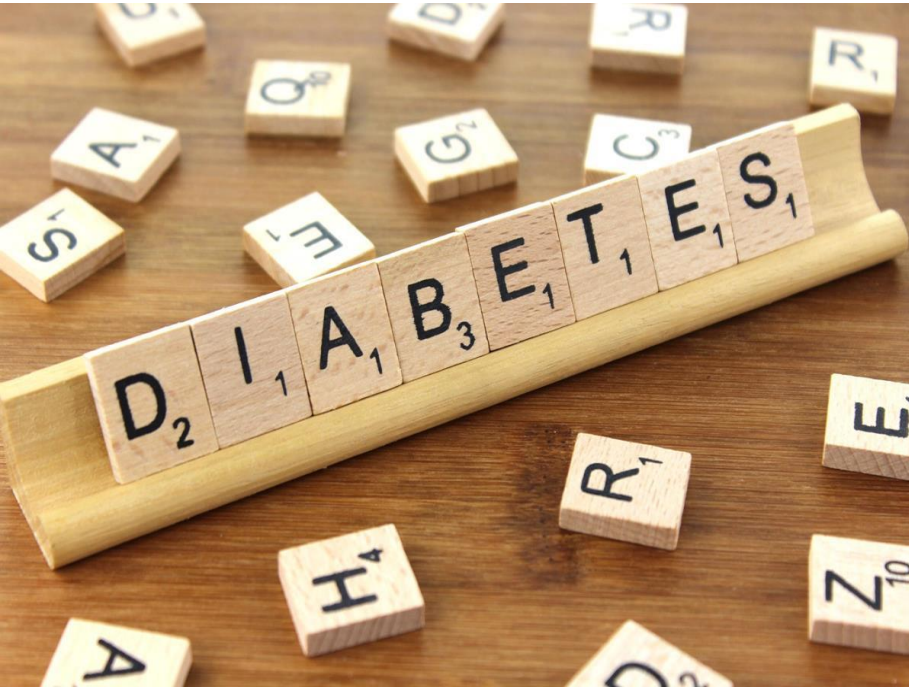
Weight-bearing exercises are beneficial

BUT

If you are finding it painful - try the pool!!



Diabetes



- **Canadian Diabetes Association**

Before beginning a program of physical activity more vigorous than walking, people with diabetes should be assessed for conditions that might contraindicate certain types of exercise, predispose to injury, or be associated with increased likelihood of cardiovascular disease (CVD).

- An exercise ECG stress test should be considered for previously sedentary individuals with diabetes at high risk for CVD who wish to undertake exercise more vigorous than brisk walking

Aerobic Exercise Guidelines

<i>Definition and recommended frequency</i>	<i>Intensity</i>	<i>Examples</i>
<p>Rhythmic, repeated and continuous movements of the same large muscle groups for at least 10 minutes at a time</p> <p>Recommended for a minimum of 150 minutes per week (moderate intensity)</p>	<p>Moderate:</p> <p>50 – 70% of person's Maximum heart rate</p>	<ul style="list-style-type: none">•Biking•Brisk Walking•Continuous swimming•Dancing•Raking leaves•Water aerobics
	<p>Vigorous:</p> <p>> 70% of person's maximum Heart rate</p>	<ul style="list-style-type: none">•Brisk walking up an incline•Jogging•Aerobics•Fast swimming•Fast dancing

Resistance Training Guidelines

<i>Definition</i>	<i>Recommended frequency</i>	<i>Examples</i>
<p>Activities that use muscular strength to move a weight or work against a resistant load *</p> <p><i>* Initial instruction and periodic supervision are recommended</i></p>	<p>3 times per week</p> <ul style="list-style-type: none">• Start with 1 set of 10 – 15 repetitions at moderate weight• Progress to 2 sets of 10 – 15 repetitions• Progress to 3 sets of 8 repetitions at a heavier weight	<ul style="list-style-type: none">• Exercise with weight machines• Free weights/bands• Body weight

Prevention of Hypoglycemia

- Monitor blood glucose before and after exercise
- If blood glucose prior to exercise is 5.5 or less, consume 15 – 30 gm CHO before starting exercise (applies only to those on insulin or oral secretagogues)
- Be aware of potential hypoglycemic responses for up to 24 hours after an exercise session. If you are experiencing episodes of hypoglycemia, check you BG (1 hour after exercise) and then 2 or 3 times over the next 12 hours or until bedtime



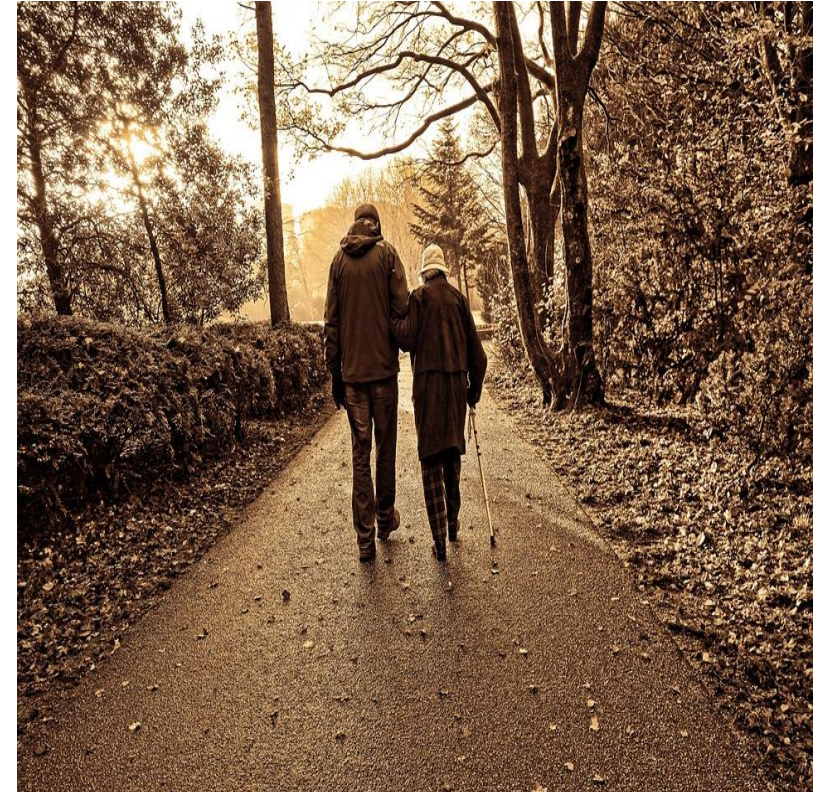
Treatment of Hypoglycemia



1. Act quickly
2. Stop exercising and sit down
3. Take 15 gm of fast acting carbohydrate
 - 15 gm CHO in the form of glucose tablets
 - (175 mL) $\frac{3}{4}$ cup regular pop or juice
 - (15 mL) 3 teaspoons, or 3 packets of sugar, dissolved in water
 - 1 Tablespoon of honey
 - 6 life savers
4. Check BG again in 15 minutes
5. Follow-up with a snack or meal

Other Precautions

- Always carry a fast acting carbohydrate with you
- Use caution when exercising in hot weather
- Exercise with a partner
- Wear some form of medical identification jewelry
- Wear well-fitting shoes and inspect feet daily



Osteoporosis - “Too Fit to Fracture”



Healthy bone

Osteoporotic bone

Exercise plan inclusions

- Weight-bearing activities/exercises
- Balance exercises for falls risk prevention

Movements to avoid

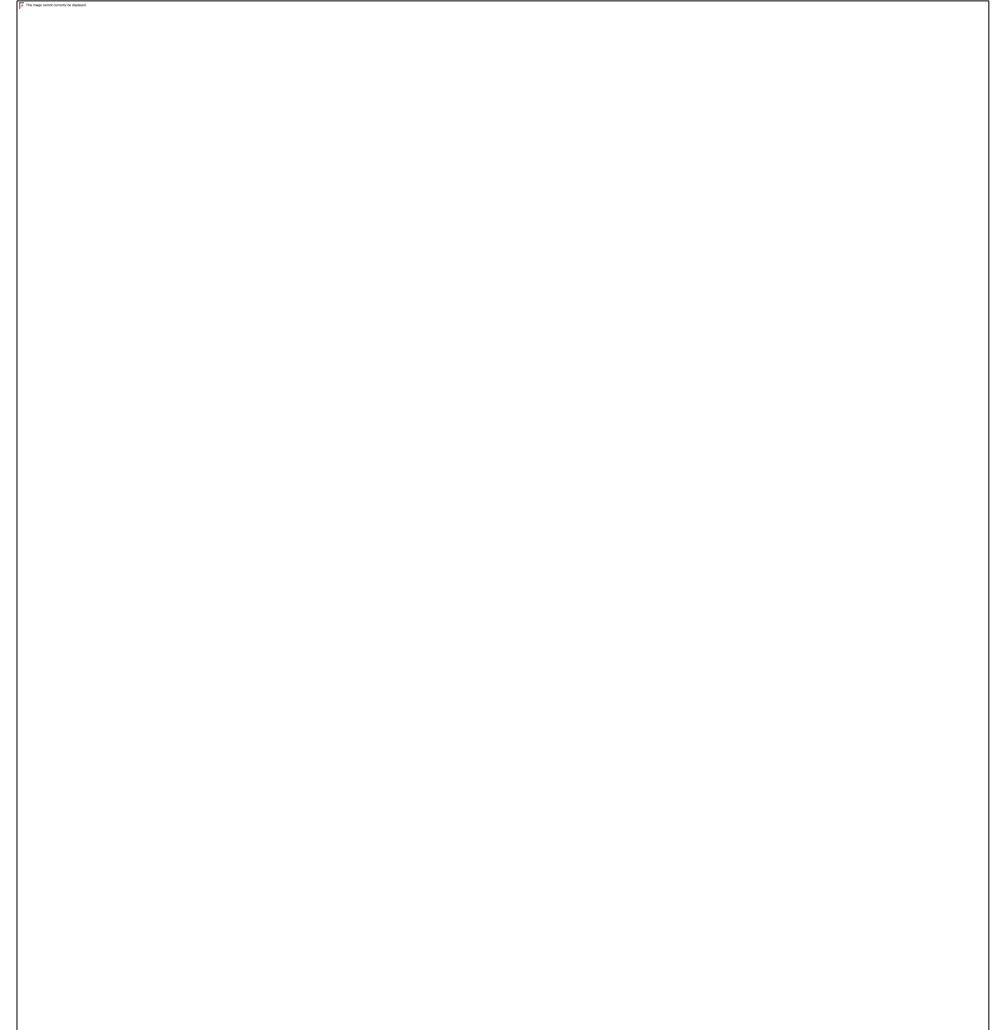
- High-impact exercises can lead to fractures in weakened bones.
- Bending and twisting can increase the risk for broken bones in the spine.

Anxiety/depression

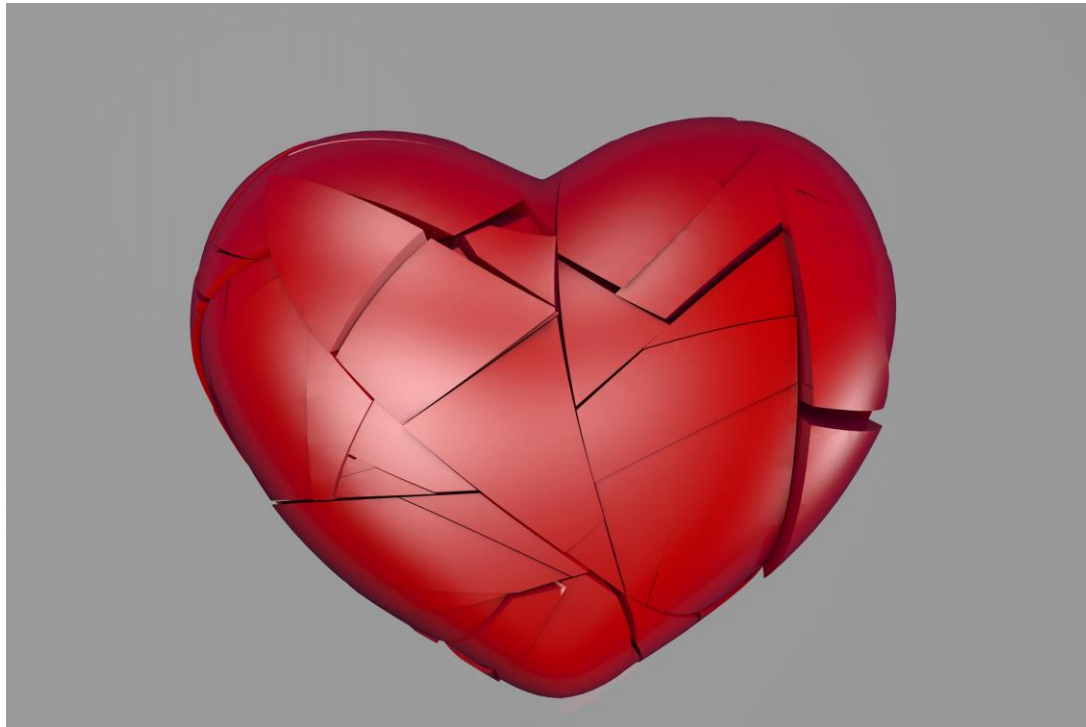
Any exercise routine has proven
to be beneficial

BUT

Numerous studies have shown
that being active in nature
reduces symptoms of anxiety and
depression and boosts immune
function



Cardiovascular Disease



- Go to Cardiac Rehab....

Questions??



Thanks!

