SUMMERVILLE

Family Health Team

Happy Movement, Happy Mind

Prepared: September 2022

Ontario

Objectives

1. Defining mental health
2. Signs of mental health struggles
3. The impact of exercise and mental health
4. The impact of exercise and degenerative diseases
5. Exercise recommendations

World Health Organization Definition

Mental health includes our emotional, psychological, and social well-being. It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make healthy choices.

Signs of Struggle

- Excessive worrying or fear
- Feeling excessively sad or low
- Confused thinking or problems concentrating and learning
- Extreme mood changes, including uncontrollable “highs” or feelings of euphoria
- Prolonged or strong feelings of irritability or anger
- Avoiding friends and social activities
- Difficulties understanding or relating to other people
- Changes in sleeping habits or feeling tired and low energy
- Changes in eating habits such as increased hunger or lack of appetite

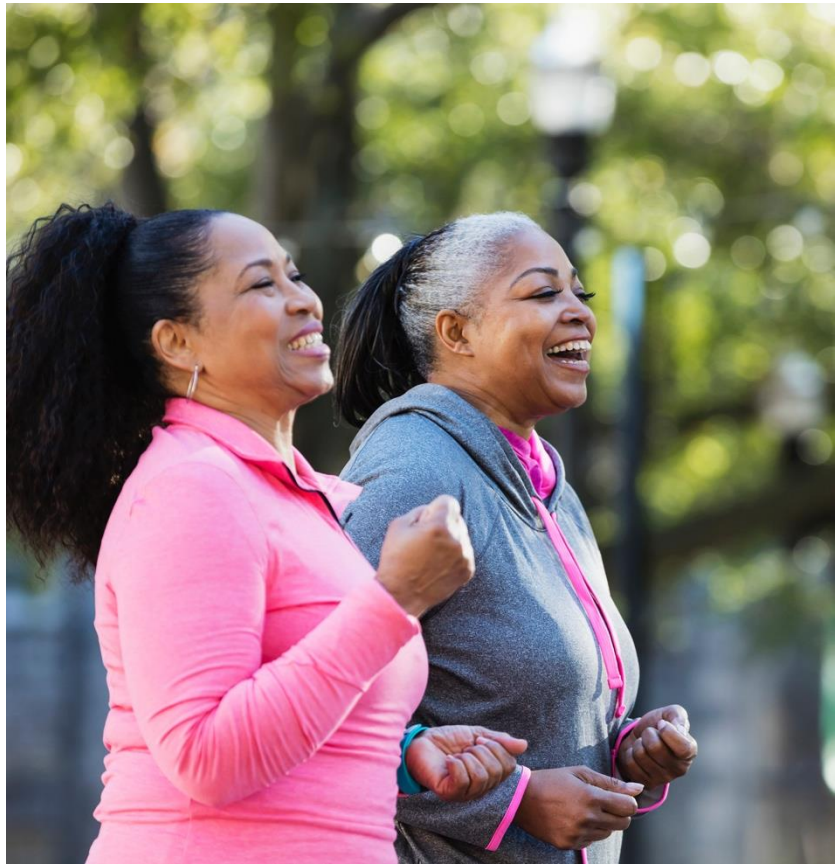
No need to make assumptions if you notice any of these signs. Although, this may be a good time to begin using your mental health tools to feel better.

The Impact of Exercise

- Mental health and physical health are linked
- This relationship is strongest with chronic conditions

The associations between mental and physical health are:

- Poor mental health is a risk factor for chronic physical conditions.
- People with chronic physical conditions are at risk of developing poor mental health.



The Impact of Exercise

- Changes in the levels of chemicals in the brain
  - Serotonin
  - Stress hormones
  - Endorphins
- Regular exercise can help you sleep better
- Exercise can improve your sense of control, coping ability and self-esteem
- Exercise can distract you from negative thoughts and provide opportunities to try new experiences
- It offers an opportunity to socialise and get social support if you exercise with others
- Exercise increases your energy levels
- Physical activity can be an outlet for your frustrations
- Exercise can reduce muscle tension, which helps you feel more relaxed

Brain Anatomy

The Prefrontal Cortex

The Hippocampus

The Hippocampus

- Neuroscientists state that people struggling with depression often have a smaller hippocampus
- Exercise produces brand new brain cells, which increases the size of the hippocampus

The Prefrontal Cortex

- In brain imaging studies using PET scans, people struggling with depression often display low activity in the prefrontal cortex
- Long-term exercise can increase the volume, or size, of the prefrontal cortex

The Brain cont'd

- With exercise, the hippocampus and prefrontal cortex increase in volume as it produces new brain cells that **improve long-term memory** and long-lasting increases in **feel good neurotransmitters**
- These changes are preceded by elevations in cerebral blood flow, and growth factors, resulting in increased neuroplasticity and neurogenesis

Neuroplasticity: the brain's ability to modify, change, and adapt both structure and function throughout life and in response to experience

Neurogenesis: the process by which new neurons are formed in the brain

Degenerative Diseases

- Epidemiological studies have found that physical activity reduces the risk of Alzheimer's disease and dementia by 45% and 28%, respectively
- Alzheimer's disease (AD) is the most common form of neuro-degenerative diseases, and is a major challenge in health care
- AD is normally treated with combined pharmacological drugs, counseling, and social care to slow the disease progression
- Exercising is a non-pharmacological strategy that may help protect against cognitive decline and decrease the risk of AD
- Exercising helps stabilize and improve the cognitive function in individuals struggling with AD, and reduces and delays the onset of severe neuro-psychiatric symptoms like apathy, confusion, and depression

Degenerative Diseases

- A meta-analysis published in 2019 prepared evidence on the safety and efficacy of physical exercise as an additional therapeutic intervention for the quality of life, cognition, and depressive symptoms across six chronic brain disorders
- These disorders were Huntington's disease, AD, Parkinson's disease, multiple sclerosis, unipolar depression, and schizophrenia
- The study suggested that exercising is superior to usual treatment in improving quality of life, depressive symptoms, attention, working memory, and psychomotor speed
- A study from Reykjavik suggests that midlife physical activity may contribute toward the maintenance of cognitive function and may help delay or reduce the risk of late-life dementia

How Much Exercise?

Exercise Recommendations

Physical Activity

- At least 150 minutes of moderate-to-vigorous activity each week
  - Can be broken into 10-minute bouts
- At least 2 workouts incorporating muscle strengthening activities
  - Can include weights, bars, resistance bands, or body weight
- Several hours each day of light physical activity, including standing

Sedentary Behaviour

- Limit sedentary time to 8 hours or less per day
  - No more than 3 hours of recreational screen time
  - Break up long periods of sitting as often as possible

150 Minutes of Aerobic Exercise

- Aerobic exercise, a.k.a. cardio, uses oxygen to fuel the body
- Examples:
  - Walking
  - Running
  - Bike riding
  - Swimming
  - Ice skating
  - Snow shoeing
  - Skiing

What is Moderate to Vigorous Activity?

RPE Scale	Rate of Perceived Exertion
10	**Max Effort** Feels almost impossible to keep going. Completely out of breath, unable to talk. Cannot maintain for more than a very short time.
9	**Very Hard** Very difficult to maintain. Can barely breath and speak only a few words.
7-8	**Vigorous** Borderline uncomfortable. Short of breath, can speak a full sentence.
4-6	**Moderate** Breathing heavily, can hold a short conversation. Still somewhat comfortable but becoming noticeably more challenging.
2-3	**Light** Feels like you can maintain for hours. Easy to breathe and carry a conversation.
1	**Very Light** Hardly any exertion, but more than sleeping or watching television.

Poll

1. Over the last week I completed at least two workouts that incorporated muscle strengthening exercises
    a. Yes
    b. No
2. Over the last week I went for a walk that lasted at least 10 minutes
    a. Yes
    b. No
3. On a typical day, I sit or lay down for less than 8 hours
    a. Yes
    b. No
4. Over the last week I took some time for myself at least once
    a. Yes
    b. No

How to Add More Movement Into Your Day

- Park further away when completing errands/shopping
- Take the stairs
- Complete daily housework/chores
- Set a timer
- Go for a walk around the block
- Get up and move during commercials or after each show
- Walk around while on the phone
- Meet friends for a walk

Tips and Tricks

- Take some time to determine your “WHY”
- Start with a little bit of movement, and build your routine over time
- Set yourself a movement goal
- Find movement that you enjoy doing
- Find an exercise buddy or sign-up for a class
- Schedule movement into your day
- If you miss a workout, that’s ok!

Exercise

- Think of it as medication that you take daily.

Questions?








Information

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Resources:

ParticipAction
https://www.participaction.com/en-ca

24 Hour Movement Guidelines
https://csepguidelines.ca

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