

# CHOOSE FITNESS!

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## Introduction

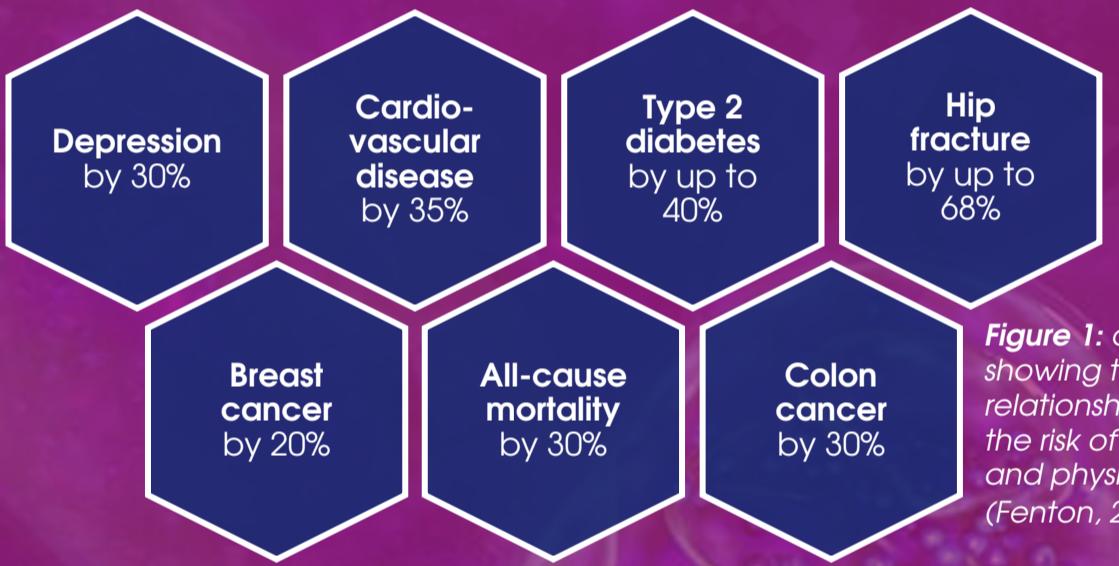
There is a well-researched association between physical activity (PA) and a lowered risk of diseases. This poster aims to inform you of the importance of PA and examples of studies providing evidence as to how PA can help your mental health, difficulty sleeping, and stress management.

It's important to try different things to see what works best for you and your schedule, in terms of increasing your activity levels. If you work part-time and/or care for children, the vigorous route may be optimal, as it requires the least amount of time per day. If you struggle with social anxiety, depressed mood or continuously get poor attainment, inactivity is a likely cause! Getting a breath of fresh air with a walk outside or taking a moment to do some housework has such a positive impact on your body and mind.

**Look out for your family, friends, and yourself; choose fitness.**

## Diseases caused by inactivity

Did you know that regular PA reduces your risk of:



### CARDIOVASCULAR DISEASE

Most studies (Reiner et al., 2013) show a relationship between high PA and low risk of cardiovascular diseases over time. These include heart attacks, strokes, heart muscle and valves diseases and coronary artery disease, among others (Steinbaum, 2019).

Exercise can also prevent the cardiovascular disease from getting worse when it is already developed. In this case, it is important to consult a professional to practice safe physical activity (Payne, 2018).

JUST 5 to 10 min a day of vigorous-intensity aerobic activity is enough to achieve mortality benefits. This is because leisure-time running has consistent reduction of long-term cardiovascular risks (Lee et al., 2014).

### TYPE 2 DIABETES

Regular exercise helps managing weight maintenance. Several studies (Brito et al., 2009) demonstrate that this can have a positive impact in glucose control and insulin response that may prevent obesity and type 2 diabetes.

Type 2 diabetes is known as a disease that alters muscle mitochondrial function. Resistance training helps increase skeletal muscle mass and mitochondrial performance to combat T2D. (Pesta et al., 2017)

Adults with type two diabetes are more likely to report sedentary behaviour and to be less active than those without the disease. Multiple factors influence physical activity in people including social influences, age and several chronic physical and mental health conditions. (Kennerly and Kirk, 2018)

## Benefits of physical activity for mental health

Research suggests that there is a strong correlation between habitual exercise and good mental health. For example, some large-scale studies showed a link between physical activity and a lower incidence of depression (Steptoe and Butler, 1996; Steptoe et al., 1997). Thirlaway & Benton (1992) demonstrated that benefits for mental health have less to do with the physical fitness of an individual and more with the act of exercising itself. As for the type of exercise, it seems that the higher the energy expenditure during an exercise session, the higher the chance of alleviating depressive symptoms (Dunn et al., 2005).

Exercise has also been shown to significantly reduce stress (Tsatsoulis and Fountoulakis, 2006) and increase sleep quality (Stepanski and Wyatt, 2003).



## Stress management

### THE IMPACT OF STRESS ON MENTAL HEALTH:

Stress can contribute to relationship issues (Flaconier et al., 2014), and substance abuse (Uhart & Wand, 2009), and cause anxiety and panic attacks (Caplan, 1994).

### THE IMPACT OF STRESS ON PHYSICAL HEALTH:

Stress can increase blood pressure and the risk of cardiovascular disease, headaches, insomnia (Thoits, 2010), increased heart rate, breathing rate and muscle tension (Taelman et al., 2009), teeth grinding (Girak et al., 2010), and gastrointestinal problems (Konturek et al., 2011). Stress can also cause various metabolic disturbances, which increase a person's risk of developing obesity (Tsatsoulis and Fountoulakis, 2006).



### HOW TO KEEP STRESS UNDER CONTROL:

Practice mindfulness and meditation, as these practices have been shown to decrease stress and anxiety (Kabat-Zinn et al., 1992; Kang et al., 2009). Spend time in green spaces, such as parks and forests (Hedblom et al., 2019). Exercise, as it has been shown to significantly reduce stress and its associated negative effects (Tsatsoulis and Fountoulakis, 2006).

## The importance of sleep



Lund et al. (2010) suggest that over 60% of university students are poor sleepers. Emotional and academic stress seems to be one of the main causes of this problem. Sleep plays an essential role in learning and consolidating memories (Walker, 2004).

### SLEEP DEPRIVATION'S IMPACT ON MENTAL HEALTH:

The lack of sleep can impair a person's reaction times (Taheri and Arabameri, 2012), mood (van der Helm and Walker, 2009; Short and Louca, 2015), and lead to poor decision making (Harrison and Horne, 1999).

### SLEEP DEPRIVATION'S IMPACT ON PHYSICAL HEALTH:

Sleep deprivation leads to a lack of energy (Short and Louca, 2015), and increases the risk of injury (Milewski et al., 2014).

### HOW TO IMPROVE SLEEP QUALITY:

Take a hot shower before going to bed to improve your blood circulation (Haghayegh et al., 2019). Avoid light-emitting screens before bed, such as smartphones, computers, or TVs (Christensen et al., 2016; Hale and Guan, 2014). Avoid caffeine in the 6 hours before bedtime (Drake et al., 2013). Limit your alcohol intake, as even mild doses of ethanol can disrupt a person's sleep pattern (Vitiello, 1997). Establish a regular sleep schedule, and exercise, though not immediately before going to bed. (Stepanski and Wyatt, 2003)



## Examples of exercise



Exercise intensity is measured in Metabolic Equivalents (METS), where sitting down requires 1 MET (Jetté et al, 1990). Tracking time you spend on activities might help you get more active. Vigorous activity for <25 mins, moderate activity for 25-50 mins, and light activity for >75 mins are all considered to be moderate amounts of daily exercise. Here are a few examples of each (Bubnis and Roland, 2019; Harvard University, n.d.):

### LIGHT ACTIVITY (<3.0 METS)

- ❖ Walking
- ❖ Standing chores (washing dishes, cooking)
- ❖ Seated fishing
- ❖ Strolling

### VIGOROUS ACTIVITY (>6.0 METS)

- ❖ Jogging (6mph+)
- ❖ Fast cycling (14mph+)
- ❖ Basketball game
- ❖ Tennis singles
- ❖ Riding

### MODERATE ACTIVITY (3.0-6.0 METS)

- ❖ Housework (hoovering, dusting, mopping, washing windows..)
- ❖ Brisk walking (4+mph)
- ❖ Swimming for leisure
- ❖ Cycling (10-12 mph)
- ❖ Recreational badminton
- ❖ Tennis doubles



## Physical activity and women



Research has shown that women are on average less physically active than men (Allen and Morey, 2010). Here are some reasons as to why this may be:

- ❖ Older PA guidelines focused mainly on vigorous PAs, which may have discouraged women, who are generally more interested in moderate PAs, such as brisk walking (Allen and Morey, 2010).
- ❖ PA can be difficult to incorporate into traditional female roles imposed on women by society. For example, research has shown that stay-at-home mums of young children are generally quite physically inactive (Allen and Morey, 2010). But things may change as exercising with children is becoming increasingly popular.
- ❖ Many gyms don't provide women with a good exercise experience for various reasons. For example, the gym equipment may be designed for more vigorous exercise which is more popular with men. Some women can also feel uncomfortable exercising in front of men. And overall, the gym is often perceived as a masculine institution. The perfect solution for these issues is women-only gyms or women-only sections. (Craig and Liberti, 2007).



## Physical activity and people with disabilities



While people with disabilities may not be able to do all kinds of exercise, they should still reach the same PA levels as people without disabilities. It is important to keep in mind that there are types of exercise for people with restricted mobility. For example, wheelchair users can use their upper body to pursue both light-intensity and vigorous-intensity activities (Bull et al., 2020).

## How to stay motivated



Research has shown that **subjective enjoyment** is a crucial factor influencing a person's adherence to an exercise program (Wininger and Pargman, 2003). Here are some tips to make the experience more enjoyable:

❖ Listen to music while exercising (Wininger and Pargman, 2003).

❖ Focus more on the internal benefits of exercise (e.g., feeling good and enjoying the process itself) and less on the external ones (e.g., losing weight). This way, you increase your intrinsic motivation, which has been shown to be more powerful in the long run than extrinsic motivation associated with superficial goals such as weight loss (Huberty et al., 2008). For this reason, it is advisable to choose physical activities that you enjoy (e.g., team sports) over ones that are more effective but less enjoyable (e.g., HIIT).

❖ Setting goals is a common practice to increase motivation. Specifically, it is recommended to set process goals (e.g., running for 30 minutes), which have been associated with increasing intrinsic motivation. These should work better than outcome goals (e.g., losing 5 kg), which are connected with extrinsic motivation (Wilson and Brookfield, 2009).



## Methods to increase physical activity



Inactivity can stem from several underlying factors: Short-term factors (e.g., lack of time, tiredness, bad weather) can be overcome with some planning ahead. Long term factors (perceived financial impact, lack of willpower, and social anxieties) can be reduced by getting friends and flat-mates to join you for walks or runs; it can also make exercise more enjoyable!

You may not enjoy the short-term effects of physical activity (e.g., increased heart and breathing rates) but long-term effects exercise has on your health can still be achieved through engagement in light or moderate-level activities.

There are many ways to get active! For students, time management is key. By setting aside time in your day to go for a walk or do some housework, you can easily increase your activity levels. This poster shows ways in which physical activity helps to reduce stress and anxiety, resulting in better sleeping patterns. Additionally, exercise has been proven to reduce stress, sharpening your focus on the task at hand; boost your mood; and improve your metabolic function by increasing the breakdown of ATP, resulting in you losing weight.

What are you waiting for? Choose fitness!



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