

HUMAN PERFORMANCE CENTRE

Having Troubles Sitting? We Can Help!

We hunted and gathered from the start of our human history. We ran, pulled, pushed, jumped, squatted, lunged, lifted, and swam. Today, we sit.

Sitting is very common in today's work and school. People from all ages should understand the detrimental effects from sustained sitting. Research demonstrates that our inactive behavior such as sitting is linked to an increase in cardiovascular disease, diabetes, obesity and musculoskeletal problems; all preventable.

Researchers gave us an impressive amount of data on why inactivity such as sitting can be detrimental to our health. Results from one study showed a loss of muscle metabolism after exposure to an environment of sitting. They demonstrated that enzymes that manage fat circulation within the muscles are reduced up to 90- 95% resulting in fat accumulation. Enzymes are responsible for muscle tone, bulk and function. When they are turned off it results in physical change. Change occurs in the postural musculature and in the metabolic pathway tied to the difficulty of weight loss.

Sitting not only changes the chemistry in your body, it is linked to the development of musculoskeletal dysfunction and pain. Today, we see it both in children and adults.

Sitting changes the connective tissue and creates accompanied pain from our passive (ligaments, bone and joint) to our active system (muscles). Research tells us our tissue creeps when we are under constant strain, which over a prolonged period of time causes deformation or stretch until a plateau is reached. During cyclic repetitive behavior such as sitting tissues may fail; therefore, creating accompanied pain. A study using myoelectric activity evaluation of the low back during sitting determined that muscle activity is not increased or decreased and demonstrates that ligaments tend to get the majority of deformation. Within the active system, deformation of muscles causes them to become weak and long. The body subsequently adapts to the lack of movement eventually leading to greater wear and tear in our weight bearing joints and essential muscles.

In summation, sitting decreases the strength of the postural muscles that support our spine and joints

and sitting changes the metabolic activity within our postural muscles. In order for people to change this maladaptive behavior repeated physical stimulation to muscles and joints as well as supportive exercise are required.

We Can Help!

We can assess, treat and prevent problems affecting muscles and joints. We will devise a plan with long and short-term goals to educate and motivate one to overcome dysfunction resulting from inactivity or overuse.

Just as we routinely brush our teeth to prevent cavities, we need to keep active and avoid prolonged sitting to stay healthy.

We need to understand that we are designed to move, swim, pull, push, squat, walk, jump, climb, and run not just for muscles and joints but also for our overall wellness.



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PHYSIOTHERAPY

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