Most regular physical activity programs focus on strength, endurance and flexibility as an important part of a healthy lifestyle to reduce the risk of developing cardiovascular disease, diabetes and some forms of cancers (Public Health Agency of Canada, 2013). In addition, physical activity programs can be used to maintain or improve postural alignment and optimal body movement patterns.

Optimal body movement is a result of connections between the body’s nervous, myofascial and skeletal systems. Evidence supports the interconnectedness of the body from head to toe, through myofascial lines and subsystems (Clark & Lucett, 2011; Myers, 2011). When one or more of these systems are no longer “in synch” with each other, the result can be inferior movement, discomfort and/or pain. A person does not have to experience a major injury to have movement problems. In fact, poor posture, dysfunctional movement(s) or pain can be caused or triggered by daily habits and activities.

For example, sitting for long periods of time can trigger an issue within the body, whether or not a person feels pain at the time. Sustaining a postural position for long periods of time or engaging in a repetitive motion at work, home or play can negatively impact body movement and function.

Whether the root cause is an injury, posture-related or repetitive motions, corrective exercises can help!

What is Corrective Exercise?

Corrective exercise is a prescribed sequence (or system) of exercises aimed at helping a person’s body to move and function naturally, or as originally designed. Here’s one way to describe what happens:

- Trainers specializing in corrective exercise use a battery of assessments to determine dominant posture and movement patterns.
- This information provides trainers with a detailed picture of what may need to be reprogrammed.
Many people do not take steps to heal properly.

For instance, some people will be overactive after an injury, while others will “rush through” the healing stages.

Who Needs Corrective Exercise?
In our view, most people would benefit from corrective exercise as a preventive therapy, including anyone with poor posture.

More specifically, a person should consider adding a corrective exercise program to their regime or routine if they are experiencing:

- body movement or function issues associated with poor posture;
- a plateau in physical performance; or
- muscle or joint issues.

Corrective exercise is most beneficial for those suffering from musculoskeletal pain or discomfort.

In our experience, many people see a positive change in quality of life (including pain reduction) if they follow a corrective exercise program that addresses:

- postural imbalances; or
- pain or discomfort caused by repetitive movements (occupation- or sport-related); or
- aspects of post-injury rehabilitation.

Understanding Compensatory Movements
When a person has poor posture, incurs an injury, or experiences some kind of bodily stress, body movements can be compromised, in the form of “compensatory” movements.

In addition, many people do not take steps to heal properly. For instance, some people will be overactive after an injury, while others will “rush through” the healing stages.

Here’s an example:

If a person “walks off” an ankle injury, the person’s mind takes control (mind over matter), essentially directing the body to make compensatory movement patterns to allow the person to carry out daily tasks.

These compensatory movement patterns become the new normal, through repetition. Unfortunately, the movements are not as fluent, strong, flexible, balanced, or complete as the person’s original state.

Corrective exercise attempts to reset altered movement patterns back to their original condition.

Developing a Corrective Exercise Prescription
First, a corrective exercise specialist will assess the client’s dynamic posture, including the client’s movement patterns and ability. This step provides general insight about the person’s postural limitations and dysfunctional movement.

Next, a battery of movement assessments is used to determine the primary areas of dysfunction. This is done with specific squatting, walking, balancing, rotational, and three-dimensional movement assessments. Some specialists may include range-of-motion tests on joints, and strength tests on muscles.
The exercise prescription starts with a sequential set of exercises to re-establish neuromuscular control. The set should consist of the following concepts, in sequential order:

- relaxation of overactive or tense myofascial tissues;
- lengthening of overactive muscles and movement of fascia;
- strengthening for weak muscles; and
- integration of motor control.

Tight or tense muscles are relaxed using breathing techniques, self-myofascial release (SMR) and postural positioning.

Tight, overactive muscles are stretched out using a variety of flexibility techniques, such as static, active or neuromuscular stretches.

Muscle strengthening involves contracting muscles that appear weak. A muscle may be weak for two reasons:

- due to altered length, e.g., where the muscle has been positioned or overextended for too long; or
- due to abnormal muscle activation patterns, i.e., the muscle no longer fires when sent a message to move; this is known as reciprocal inhibition.

Motor control (intermuscular activation) is the final sequence where all muscles of a myofascial line and its opposing line are engaged into coordinated movement patterns. Movement patterns begin slowly and under control; this ensures proper firing patterns.

As the person makes progress (improved stability and ability), then subsequent movement patterns can become more complex and dynamic.

**Contraindications**

As with any activity guideline, there are contraindications for corrective exercise. Clients with any type of organ failure such as heart, lung, liver, blood and skin should not perform self-myofascial release (SMR) as the method of muscle relaxation.

Clients with an acute injury (i.e., where they are experiencing pain through a range of motion) should not complete muscle activation exercises. People with acute injuries should consult a medical doctor.

**Finding a Corrective Exercise Specialist**

Look for exercise specialists with formal education in the exercise sciences and accreditation from a certifying organization based in Canada.

Certified corrective exercise specialists:

- work with a variety of health care professionals in preventive, sports conditioning, and rehabilitative settings; and
- work to improve movement performance, posture and reduce the risk of injury.
Medical doctors can refer patients to exercise specialists working in recreation facilities or private personal training studios. In addition, some physical therapy and chiropractic clinics have corrective exercise specialists working in the clinic. To find a corrective exercise specialist, visit the Alberta Provincial Fitness Unit’s fitness professional database.

In our view, corrective exercise can help anyone completing a post-rehabilitative program, and athletes at all performance levels, from recreational to elite. Corrective exercises and programs can be completed on their own, or as part of a regular training program.

References


Disclaimer:
The views and opinions expressed herein are those of the author/s and do not necessarily reflect the views and opinions of the Alberta Centre for Active Living or the WellSpring Advisory Committee.

Honourable Dave Rodney (BA, BEd, MRE), MLA Calgary-Lougheed, has been a wellness champion during his three Legislative terms—during which he has served on over 2 dozen committees. He is an entrepreneur, filmmaker, writer, keynote speaker, educator, and is the first Canadian to summit Mt. Everest two times. He founded the “Top of the World Society for Children” with his wife Jennifer; and they have two wonderful sons.