

Achieve Peak Performance with Gait Analysis

Being able to move efficiently is important in avoiding injuries. Having joints capable of providing sufficient movement and muscles capable of producing sufficient force is vital to generate an efficient gait cycle. If joints are stiff (usually caused by muscle tightness), limiting range of motion, or muscles are weak, the body must find ways of compensating for the problem, leading to biomechanical abnormalities. Examples of common biomechanical abnormalities include overpronation, oversupination, hip hiking or pelvic tilt.

Many injuries are often caused, at least in part, by poor biomechanics. Runners and athletes whose sports require a high level of running and jumping should make sure they have had a gait analysis and buy the correct footwear to avoid future overuse injuries. Common overuse injuries associated with poor gait biomechanics include shin splints, plantar fasciitis, iliotibial band syndrome, achilles tendonitis and low back pain.

Gait analysis is the quantitative assessment of coordinated muscle function; evaluation is conducted in a laboratory and typically involves a dedicated facility and staff. A visual assessment of walking or running is supplemented by video recording. Videos can be observed from several visual planes at slow speed, allowing detection of movements not observable at normal speed. Joint angles and various time-distance variables, including step length, stride length, cadence, and cycle time, can be measured.

The information collected is reconstructed into a graphic report providing objective measurements of your current abilities as well as strategies for improvement. Potential gait analysis outcomes include identification of abnormalities, suggestions to improve mechanics, decreased chance of overuse injury and improved accuracy, speed and form.

For further information on gait analysis or to schedule, please call 732-295-1778.