

Medical Motion

A Division of Sports Motion, Inc.

Article on HAWC gait training by Amy Barnett

Over the past few years interest in the practical applications of gait analysis has grown exponentially. As such, technology-based gait analysis is no longer segregated to biomechanical research laboratories and specialty clinics but it is now a widely available and used application in a variety of areas. Health care, wellness, performance, and retail professionals alike are benefiting from the addition of video gait analysis to their programs. With new and affordable technology these professionals can now more readily identify “abnormal” movement that may be contributing to injury and reduced efficiency/performance during walking or running.

Many of the Health and Wellness Centres (HAWCS) out of the US Air Force bases are following this technology trend with the goal of proactive injury prevention. Each year, the US military sustains hundreds of thousands to millions of dollars in losses due to running-related injuries in their soldiers. Unfortunately, overuse injuries tend to be more complex to both diagnose and treat than acute injuries as the exact cause is rarely readily apparent and in most cases is the result of multiple factors. We now know that simply treating the area of pain is no longer an acceptable course of action. Instead, the multiple contributors to injury must also be identified to prevent reoccurrence upon return to normal activity. This is where methods such as gait analysis have proven to be beneficial.

Not only has Sports Motion played a crucial role in this HAWCS initiative through providing individualized motional analysis systems for many of their centres, but they are also providing training for it's users. The Medical Motion branch of Sports Motion in collaboration with Stride Evolutions, a sports therapy and performance centre specializing in video gait analysis out of Calgary AB Canada, have developed an innovative training seminar program to help professionals set up their own video gait analysis programs. These seminars provide training on:

- Current research on normal movement throughout the running gait cycle, including foot biomechanics, and the role of various muscles and structures of the body throughout the gait cycle.
- Current knowledge in footwear construction and fitting.
- Running biomechanical issues commonly seen in clinic
- Specific case studies – video's demonstrating various faulty movement patterns seen during gait
- Video gait analysis protocols: for data acquisition and organization, gait lab set-up and camera placement, and systematic procedures for analyzing video.

- In depth training on the Sports motion hardware components, and software program specifically for the use of gait analysis.

Most recently, Sports Motion hosted it's largest training seminar to date out of the MacDill Air Force Base in Tampa FL. Physiotherapists, exercise physiologists, and wellness specialists from various bases across the United States attended the seminar. The week was especially successful because the various sectors of the health and wellness program were represented. The participants could combine their knowledge and experiences in a team atmosphere to analyze, and interpret gait video using the Sports Motion software.



Group photo from the MacDill AFB gait training seminar on Sept 19, 2008. (Far left – Amy Barnett, Director of Stride Evolutions out of Calgary AB Canada. Far right Kyle Jean, technical specialist for Sports Motion Inc.)

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