



GlideCycle™ vs. Existing Forms of Exercise for Amputees

Individuals with physical disabilities encounter unique challenges and barriers to finding safe and effective forms of exercise and physical mobility. For example, with amputees, mobility and exercise capabilities vary significantly with the level of amputation as well as the physical status of the individual.

Bicycling is simply not an option for a majority of amputees due to level of amputation, difficulty of maintaining feet comfortably on the pedals, and the level of balance required to stay upright and safe. Only highly athletic amputees with the lowest level amputations are candidates for cycling. With higher amputations, performing a pedal stroke becomes difficult due to missing muscle groups as well as potential shearing forces that can occur where the skin meets the socket.

A unique feature of the GlideCycle™ that **does not occur with bicycling** is the simulation of normal walking and running motions that lead to improved functional abilities, ambulatory capacity, balance, fall recovery, and resistance.

Only few, select athletes with access to the most sophisticated and expensive prosthetic technology will ever experience the ability to tolerate running for exercise. Additionally, upper body ergometers do not translate to improved function in large muscle groups used for ambulation and are not tolerated well by many individuals with shoulder ailments, weakness or sensitivity to cardio-respiratory stresses.

The GlideCycle™ permits freedom and independence in exercise as well as mobility enhancement unlike any other form of exercise or physical training. The GlideCycle™ differs from running, bicycling or other modes of exercise in the following ways:

- Simulates upright walking and running postures and movement patterns in disabled individuals which translates into improvements in overall function, ambulatory capacity and balance
- Accommodates many diverse orthopedic, neurological and painful leg conditions by allowing the ability to train with one leg or favor a leg without painful, pounding or shearing forces to joints and prosthetic devices.
- Requires significantly less balance than bicycling
- Provides a safe, effective and fun form of low-impact strengthening and aerobic exercise
- Allows those normally confined to stationary equipment to enjoy exercise and independent mobility outdoors with family and friends
- Achieves improved posture, confidence and sense of overall well-being for those with physical disabilities
- Amputees training on the GlideCycle™ have reported significant improvements in tolerance of prosthetic limbs for longer periods of time, thus improving ambulatory capacity and function.