



PHYSICAL ACTIVITY MONITORING



Physical Activity Research

The ActiGraph is an ideal tool for physical activity, sports, and fitness research. The ActiGraph objectively measures and records the amount and intensity of activity and counts the number of steps taken over a given period of time. Algorithms have been provided to ActiGraph by prominent university groups that convert the collected data into calories (Kcals) and MET's (Metabolic Equivalents) for adults and children.

Sleep Studies

The ActiGraph can determine sleep latency, amount of sleep, number and duration of awakenings, and overall sleep efficiency. The ActiGraph can be used in clinical applications to objectively determine the patient's sleep hygiene and as a tool aiding in the diagnosis and treatment of insomnia, circadian-rhythm disorders, and other sleep disorders. The ActiGraph can also be worn on the ankle to aid in the detection of restless leg syndrome (RLS) and periodic limb movement disorder (PLMD).

Clinical Use

The ActiGraph can be used in weight loss/management programs as prescribed by a physician to accurately determine a patient's activity levels, caloric expenditure and to help determine if a sedentary lifestyle makes them a candidate for the onset of Adult (type 2) diabetes. Monitoring the patient ensures they are following their care plan and can also serve as a motivational tool.

Drug Efficacy and Clinical Research

The ActiGraph has been used extensively in the area of Chronic Fatigue Syndrome (CFS). The sensitivity and accuracy of the ActiGraph allows for the detection of subtle changes in activity levels or patterns with the intervention of drug therapy.

Child Development

Few activity monitors can claim accuracy for adults and children; however, the ActiGraph has been validated for both. The ActiGraph can be used in the study of Attention Deficit Disorder (ADD) and Attention Deficit Hyperactivity Disorder (ADHD) and has been utilized in the National Institute of Child Health and Human Development (NICHD) Study of Early Child Care (SECC). The SECC is the most comprehensive child care study conducted to date to determine how variations in child care are related to children's development.

Veterinary Research

The ActiGraph is currently being used in a number of zoos across the U.S. to assess the activity level and energy expenditure of animals. This data is used to help caretakers determine the animal's dietary needs and spatial requirements.

Government Research

The National Health and Nutrition Examination Survey (NHANES) used the ActiGraph to objectively measure the physical activity of study participants. The ActiGraph is widely used by government agencies ranging from the National Institute of Health (NIH) and the Centers for Disease Control and Prevention (CDC) to the US Navy and Air Force, as well as various Veterans Administration (VA) hospitals.

Rehabilitation

The ActiGraph is essential to the physical therapist providing rehabilitation treatment to help assess level of pain, strength, range of motion, endurance and gross motor function. The ActiGraph can be worn during physical therapy sessions or at home to determine if outpatient rehabilitative exercises and activities are improving the patient's endurance and function.