

Ask the Professional – Understanding Kinesiology

I am often asked what exactly Kinesiology is and how it would be applied in a rehabilitation setting. Kinesiology is by definition the science of human movement and of the forces that are exerted on the body from both outside sources (i.e.: gravity and ground reaction force) and from internal sources, such as those produced by the tendons and muscles. The scope of practice of a Kinesiologist is as follows: The assessment of movement, performance, and function; and the rehabilitation, prevention, and management of disorders to maintain, rehabilitate, and enhance movement, performance, and function in the areas of sport, recreation, work, exercise, and activities of daily living.¹ Kinesiology can be applied to the body as a whole, with respect to understanding how forces transmit from one region to the other along the kinematic chain or can be applied to a specific region, for example the shoulder complex when throwing overhand. Kinesiology has recently become a regulated health profession and many Kinesiologists work with athletes, in industrial settings as well as in rehabilitation and research centres in order to apply and expand their knowledge to both prevent injuries, reduce the rate of injuries and to develop ergonomically sound environments for people to work and live in. When you consider that the body is basically a biological machine that both breaks down and requires fuel to keep it working, biomechanics is an vital component of the curriculum for kinesiologists. Biomechanics is the study of the effects and control of the forces that act on and are produced by the body and it often broken down into 2 subdivisions; *kinematics*, which describes the motion of an object without consideration of the forces that cause movement and *kinetics* which describes the force production, both forces that cause motion and those that maintain a lack of motion.² I find that my undergraduate training in Kinesiology has been absolutely instrumental in helping me to both correctly identify the causative factors leading to biomechanical dysfunctions and to prescribe specific rehabilitation programs to address them accordingly. For anyone who is interested in the body, how it works and why it can 'break down' then please visit the Ontario Kinesiology Association at <https://www.oka.on.ca/>.

References:

- 1- Ontario Kinesiology Association - <https://www.oka.on.ca/>
- 2- Ross, K. (2008). Biomechanics of the lumbar spine. Rehabilitative Science, Session 9.

For more information on this topic, please contact



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