

Misunderstood – An Elastic Band Analogy

I teach in a two-year college diploma with students who have a variety of educational preparedness. Some are straight out of high school where grade 9 or 10 math may have been their last math class, and some are returning to college for a second career. Understanding the principle of a stress-strain curve and how it applies to stretching tissue (muscles, ligaments etc.) can be a challenge for some students and the gap in their prior knowledge of graphs (math) becomes apparent. Their knowledge base is either insufficient or incorrect. They have difficulty translating the meaning of the graph to the effect on stretching tissues.

The analogy I use to help them understand this concept is of an elastic band. Everyone has prior knowledge of an elastic band and how it can stretch and lengthen and then recoil to its normal resting position. If the load is too great for the elastic band, then it will break or rupture, just as a muscle or ligament will if it is stretched (strained) beyond its capacity.



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