

Endurance Performance

Kinesiology is the scientific study of human movement. Each sub-discipline of Kinesiology has a specific focus (e.g., Biomechanics, Exercise Physiology, Motor Behavior, Nutrition, Sports Medicine) – but they are all interested in understanding human movement. In the context of this course, we will be talking about human performance with most of our focus on how to swim, bike, and/or run faster or further. When we start looking at questions like: How much should I drink during a race? What should my HR be during training? We need to have a context when coming up for answers. To help give some context, below are four ‘case studies’ that describe a wide range of people who participate in triathlons. You may find that your answers to certain questions need to be tailored for each case study.

Case study 1:

Jimmy is new to triathlon. He is a 27 year old who has not been very active and looking to do his first Sprint Triathlon in about 8 weeks. He currently owns a road bike with standard road bike handle bars and pedals with toe cages. He rides about 50 miles per week, runs about 12 miles per week, and swims about 6,000 yards per week. Although he has not competed in some time, his last 5 K run was 8 years ago and he did it in a time of 24 minutes. His goal is to eventually be competitive at the age group level.

Case study 2:

Kathy has been racing triathlons for about 3 years. Last year, she was on the age-group (40-44) podium in most of her sprint races but never was on the podium for any of her Olympic distance races. She rides an all-carbon road bike with aero bars and Look pedals. Her last sprint triathlon (750 m swim, 20 K bike, 5 K run) had these splits (age group place in parentheses): Swim: 18:51 (5), T1: 3:35 (15), Bike: 48:58 (3), T2: 2:40 (8), Run: 29:57 (5) – Overall 3rd. Her goal is to continue to podium for Sprint races and Podium for an Olympic distance race.

Case study 3:

Mark is going to do his first half-ironman distance race. He has done a few sprints and Olympic distance events and is following a 20 week training program. His goal is to finish ‘comfortably’ and is not overly concerned with making the cutoff times. His last Olympic distance race he completed in a time of 2 hours 35 minutes. His bike set up is a carbon road bike with aero bars and clip in pedals.

Case study 4:

Sue is a consistent podium finisher in her age group (30-34) and often places in the top 3 overall female in sprint and Olympic distance races. Sue has completed an Ironman and has the goal of being on the podium for her age group for her next Iron-distance race. She has a tri-bike, power meter, clip-in pedals, and has had a professional bike fit.