

Bicycle Gait – A Continuum Perspective; Clinical Management to the Olympics and Paralympics

Approximately 35million people ride bicycles in the USA for recreation, fitness, transportation or competition. Overuse injuries related to bicycling, most commonly in the knee and spine, are estimated to occur in 50-85% of all cyclists. Most overuse injuries are caused by irregular positioning of the bicycle relative to the cyclist and often resolve with simple changes to the position of the bicycle. Bicycling has a unique “gait” different than that of walking and running, thus clinical guidelines that lead our management of walking and running injuries do not always apply to cycling. Effective clinical management of the cyclist requires knowledge of bicycling biomechanics, cycling skills and the mechanics of the bicycle; in addition to observation of the cyclist, the bicycle itself and how the cyclist rides their bicycle. Healthy bicycling includes well-positioned equipment, pedaling skills, a reasonable training progression and exercises that encourage the adaptation of the human body to the specific demands of cycling.

Bicycling at its highest level of competition and performance occurs at the Olympic and Paralympic levels. In this presentation we will review the upcoming bicycling competitions of the Rio 2016 Olympic and Paralympic games. The Olympic Games’ bicycling competitions are diverse as is the paracycling competition. Athlete governance of general paralympic sport is much like that of clinical practice. Athletes must undergo evaluation of their abilities in order to race. Areas of evaluation include medical history, neuro/musculoskeletal, bicycling skills and adaptive equipment. Paracycling classification will be discussed as a means to better understand bicycling function.

Brief Bio

Erik Moen PT is the owner of BikePT and Corpore Sano Physical Therapy in Kenmore WA. A graduate from Pacific Lutheran University (BS Biological Research) and University of Washington (BS-PT). His clinical expertise and primary practice is with the bicyclist. His bicycle specific background includes racing (road, mountain, cyclocross and track), coaching, work with USA Paracycling at Beijing 2008 and then as USA/UCI Classifier for Paracycling.