PROJECT

TITLE: “Determinants of performance in Cross Country Skiing”

DESCRIPTION: Cross country skiing is an endurance sport where the goal is to maximize performance while minimizing energetic cost of locomotion; therefore the efficiency of movements is determinant for the success. Competitive skiers are required both great technical skills and high energetic and muscular qualities. Long learning time and hard training are necessary to reach high level of performance in this sport. It is however still unclear which are the characteristics that are more relevant on efficiency. The aim of the project is to compare skiers of different performance level in order to evaluate the role of biomechanical vs energetic determinants of skiing success. It will be performed biomechanical, muscular and energetic analysis of different cross country skiing techniques and the assessment of efficiency parameters (net, gross and delta efficiency). The study will be realized at the Centro di ricerca Sport Montagna e Salute, located in Rovereto, that has a well established experience in cross country skiing and strong connection with international researchers in the field of winter sport. The laboratory is equipped with a very special treadmill that allows the testing of the skiers in controlled condition and specific instrumentations for the assessment of biomechanical, muscular and energetic parameters.

TUTOR: Prof. Federico Schena

Department of Neuroscience – Section of Exercise and Human Movement. University of Verona.
Email federico.schena@univr.it

PUBLICATIONS