

**NORTHERN MICHIGAN UNIVERSITY  
DEPARTMENT OF HPER**

**CONSENT TO ACT AS A HUMAN SUBJECT**

Subject Name (print): \_\_\_\_\_ Date \_\_\_\_\_

I hereby volunteer to participate as a subject in exercise testing. I understand that this testing is part of a study entitled: "All rise, or please remain seated: strategies for cycle-run triathlon transitioning" The purpose of the study is to investigate the effect of varying cycling positions (seated versus alternate standing and seated) on subsequent running, similar to a cycle run transition.

I hereby authorize Randall L. Jensen, Manfred Vieten, Cale Anderson, Greg Daw and/or assistants as may be selected by them to perform on me the following procedures:

- (a) I understand that I am being asked to exercise on cycle ergometer on four separate days as well as to run on a treadmill on three of those days.
- (b) I understand that my heart rate will be monitored during the cycling and running exercise. This will involve a band around my chest to measure heart rate.
- (c) I understand that during one of the cycling trials and after two of the running trials my blood lactate will be measured by collecting several drops of blood from my fingertip.
- (d) I understand that I will have accelerometers on my ankles while running.
- (e) I understand that I will have six electrodes placed on my dominant leg and trunk, one each on the front and back of the thigh (Vastus Lateralis of the Quadriceps, Semi Tendinosis of the Biceps Femoris); one each on the front and back of the calf (Gastrocnemius and Tibialis Anterior); one on my back (Erector Spinae) and one on the abdomen (Rectus Abdominis). These electrodes will be used to assess muscle activity, via electromyography while running on the treadmill.
- (f) I understand that I will have reflective markers placed on my shoulders, arms, legs and feet to allow my running form to be monitored using video during the running.

2. The procedures outlined in paragraph 1 [above] have been explained to me.

I understand that the procedures described in paragraph 1 (above) involve the following risks and discomforts: temporary soreness from finger because of the stick techniques used to collect blood; and that temporary muscle pain and soreness may be expected. In addition there may be minor skin irritation from the electromyography electrodes. However, I understand that I can terminate any test at any time at my discretion. Moreover, I should cease any test if I experience any abnormalities such as dizziness, light-headedness, or shortness of breath, etc.

I understand that with any type of physical effort there is a small risk of fall and/or heart attack. In order to prevent any of the above-mentioned risks, I understand that the examiners shall adopt

the necessary measures to prevent them such as: using physical tests in accordance with my athletic conditioning and monitoring my heart activity during the tests.

To prevent the risk of falls, the treadmill will have the appropriate supporting bars to prevent the falls using this machine. For prevention of falls I must have appropriate equipment for running on the treadmill: running shoes and sportswear clothes (not provided by the researchers).

I understand that to prevent the risk of blood infections the researchers will use: gloves, sterilized finger-stick lancets, and appropriate techniques to prevent the spread of blood borne pathogens during the blood lactate test.

3. I have been advised that the following benefits will be derived from my participation in this study: aside from the educational benefit of learning about running analysis and perhaps what happens to me during a triathlon transition, there are no direct benefits to me.
4. I understand that Randall L. Jensen, Manfred Vieten, Cale Anderson, Greg Daw and/or appropriate assistants as may be selected by them will answer any inquiries that I may have at any time concerning these procedures and/or investigations.
5. I understand that all data, concerning myself will be kept confidential and available only upon my written request. I further understand that in the event of publication, no association will be made between the reported data and myself.
6. I understand that there is no monetary compensation for my participation in this study.
7. I understand that in the event of physical injury directly resulting from participation, compensation cannot be provided. However, if injury occurs, emergency first aid will be provided and the EMS system activated.
8. I understand that I may terminate participation in this study at any time without prejudice to future care or any possible reimbursement of expenses, compensation, or employment status.
9. I understand that if I have any further questions regarding my rights as a participant in a research project I may contact Dr. Brian Cherry (906-227-2300) [bcherry@nmu.edu](mailto:bcherry@nmu.edu), Assistant Provost of Graduate Education/Research of Northern Michigan University. Any questions I have regarding the nature of this research project will be answered by Dr. Randall Jensen (906-227-1184) [rajensen@nmu.edu](mailto:rajensen@nmu.edu).

Subject's Signature: \_\_\_\_\_

Witness: \_\_\_\_\_ Date: \_\_\_\_\_