

High Protein Diets and Long-chain Fatty Acid Oxidation Disorders

The purpose of this study is to determine if having a fatty acid oxidation disorder changes how your body controls your weight. It is also to determine if eating more protein will change the amount of muscle you have. Foods that have a lot of protein include skim milk, yogurt or chicken. The last purpose is to determine if taking a medium-chain triglyceride (MCT) supplement before exercising will improve your ability to exercise without muscle pain. (MCT is the oil that can be used for energy by people with long-chain fatty acid oxidation disorders.) This study requires 2 trips to Portland, Oregon and Oregon Health & Science University. In Portland, you will be admitted to the General Clinical Research Center (GCRC). The study will take about 4 months to complete. During each admission to the GCRC, you will have several measurements taken. These include your body composition, the amount of fat in you liver and muscle, the amount and type of energy you are burning. The amount of fat in your liver and muscle will be measured by MRI and will not require a biopsy. You will be asked to collect all your urine for 24 hours. You will be asked to walk on a treadmill for about 45 minutes. You will have an iv catheter placed in your arm for blood drawing. Your blood will be drawn several times before and after you eat, and before and after you exercise. During the 4 months between the trips to Portland, you will be randomly assigned to continue your current high carbohydrate diet or follow a diet higher in protein. Random means there is a 50% chance of being assigned the high carbohydrate diet and a 50% chance of being assigned the high protein diet. Neither you nor the investigators will know which diet you are assigned until you arrive in Portland for the 1st visit. There will be a total of 24 subjects with fatty acid oxidation disorders and 24 control subjects enrolled in this research study at OHSU.

The costs of the study once you arrive at OHSU are covered. We request that one parent accompany you to your GCRC visits. Travel expenses to and from Portland are not covered. The study staff will be available to assist you in finding reduced fare travel arrangements if needed.

Research opportunity: Children with long-chain fatty acid oxidation disorders

A new study looking at the effects of 4 months of a high protein diet on body weight and metabolic control of fatty acid oxidation disorders is being conducted at OHSU. If you have LCHAD or TFP deficiency or if you have VLCAD deficiency and are 8 years old or older, you may be eligible to participate. Participants must come to OHSU and stay at the Clinical Research Center for 4 days on two different occasions. Participants may be asked to follow a standard high carbohydrate diet or a diet high in protein. The chance of being asked to follow the standard high carbohydrate diet is 50%.

**For more information,
please contact Melanie
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The logo for Oregon Health & Science University (OHSU), consisting of the letters 'OHSU' in a large, bold, serif font.