

Dietary nitrate intake has been associated with different metabolic effects in skeletal muscle and adipose tissue. In the former, dietary nitrate seems to enhance muscular performance via an increased efficiency of the mitochondrial respiratory chain whereas in adipose tissue animal studies have reported a browning effect with reduced efficiency of the mitochondria after dietary nitrate. In addition, dietary nitrate has been found to improve peripheral and cerebral vascular function. These vascular effects, combined with the putative improvement of cellular metabolism and direct involvement of NO in neurotransmission and synaptic formation, could also explain the beneficial effects of dietary nitrate on cognitive function. These studies were however conducted in young healthy subjects. In this project, we are going to investigate the effects of dietary nitrate on cognitive function in older adults.