Mini presentation

Diet and cognitive function

Gut and brain!?- Hansoo
What is with Diet and cognition

- Recent studies suggest that neurovascular integrity could be regulated by the gut microbiome.

- including cerebral blood flow (CBF) and blood-brain barrier (BBB) function, neurovascular integrity plays a major role in determining cognitive capability.

- Let’s see if Ketogenic diet (KD) intervention would alter gut microbiome and enhance neurovascular functions.
Ketogenic Diet

- Water Consumption
- Carbohydrates
- Monounsaturated and Saturated Fats
- Fats
- Proteins
Experimental group  Control group

Fat  Normal/ no diet

14 weeks old
16 week later

- mice had significant increases in CBF and P-glycoprotein transports on BBB
- to facilitate clearance of amyloid-beta, a hallmark of Alzheimer’s disease (AD).
16 weeks later

- Ketogenic Diet
  - Lower glucose
  - High fat metabolism

- Gut microbiome

- P-glycoprotein transports on BBB
  - including cerebral blood flow

- Enhancement of Neurovascular integrity

reduce risk for neurodegeneration
Don’t run into fat yet!
References