

Behavior at the Interface

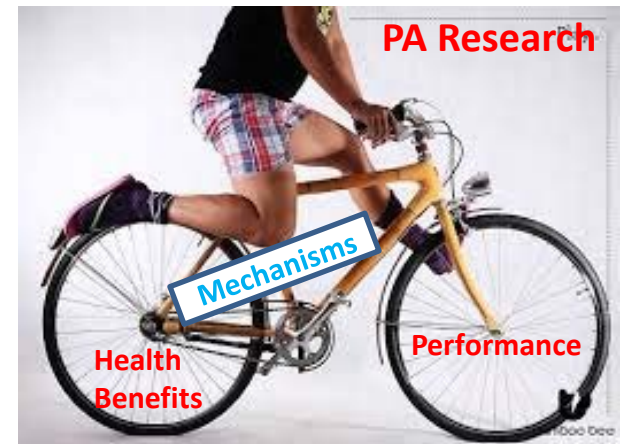
Mouse behaviors of interest to NIDDK/NHLBI

- Ingestive and related behaviors
- Physical activity*
- Others?



Background

- Physical activity (PA) is a whole body (whole NIH) phenomenon
- PA is known to prevent or benefit disease, other aspects of human health
 - CVD
 - Cancer
 - Obesity and metabolic diseases (diabetes)
 - Depression, addiction, dementia
 - Osteoporosis, sarcopenia
 - Generalized pain and debility
 - Lifespan--fertility, development, aging



- Most current PA research focused on one disease or population, focus tends to be on health outcomes (patients) or performance (healthy subjects)
- **Mechanisms that explain the health benefits of physical activity have not been completely pinned down**

Physical activity--discussion

Physical activity as a perturbation in mouse testing

- Is there interest?
- Is there benefit?
- Is it possible?



- Are measures of PA sufficient?
- Can we measure metabolic phenotypes during PA? Due to PA?
 - non-steady state
 - bigger dynamic range for tests
 - uncover disease mechanisms
- Is the **drive toward PA** of interest?
- Are vivaria set up to encourage natural behavior with respect to PA?

