Longitudinal training study aiming to identify how motor experiences during infancy influence emerging cognitive abilities predictive of school readiness.

Motivation
- Do motor skills predict children’s ability to learn about the world?
- Can we use simple motor training to promote healthy development?

Project Description
- Parents will play games with their three-month-old babies designed to encourage the onset of independent grasping.
- The long-term effects of the games will be assessed at 10 and 16 months (see Figure 1).
- Measuring cognitive skills with tasks tapping into executive functioning and tool use behaviors.

Study team members:
- Klaus Libertus (PI), Darcy Smith (graduate student), and Ran An (lab coordinator), as well as one Pitt undergraduate student (TBD).

Context
- Motor skills predict some developmental disorders.
- Embodied cognition suggests that learning is facilitated by our motor skills.
- Do early emerging motor skills affect cognitive development, with potential long-term impacts for school readiness skills?
- The current study extends previous training studies to examine effects outside of motor domain
- Emerging executive function skills and applied problem-solving during tool use.

Potential Impact
- Findings have implications for theory and practice
- Provide evidence for a developmental cascade linking motor with cognitive skills
- Providing a mechanism explaining developmental change
- Provide empirical evidence for embodied cognition perspective
- Applications outside Psychology
- Physical Therapy
- Clinical interventions
- Robotics and artificial intelligence

Pilot Data
- Collected pilot data in November and December 2019
- Will implement changes to data collection procedure to ensure project success
- Move to 100% online data collection
- Make more use of parent-report measures

References
- Please see our lab website for more information: www.onlinebabylab.com
- Full grant application with references can be accessed via QR code