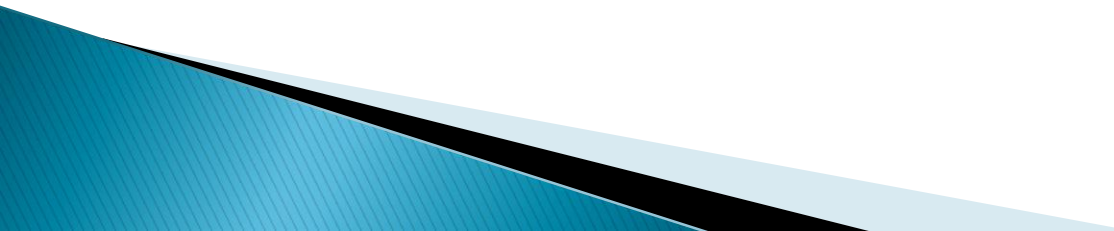


Research of Interventions in Cerebral Palsy

Edward A. Hurvitz, MD
Associate Professor and Chair
James W. Rae Collegiate Professor
Department of PM&R, University of Michigan

Just a few issues....

- ▶ Recruitment and Heterogeneity
 - ▶ Defining the intervention
 - ▶ What is the outcome of interest, and how do you measure it?
 - ▶ Intervention across the lifespan
- 

Recruitment

- ▶ Cerebral palsy is the most common childhood onset physical disability
 - 3 to 4/1000 births



Should be no problem, right?

Heterogeneity

▶ Based on Etiology

- Mix premies with IVH with Holoprosencephaly?
- What about later onset (e.g. stroke at 15 months)

▶ Presentation

- Hypertonicity and Dyskinesia
- Topography (Hemiplegic, Diplegic, etc.)
- GMFCS/MACS/CFCS
 - *The 125 types of CP*

Single Center Study?

- ▶ Difficult to find the group
- ▶ Registry efforts



Multicenter?



- ▶ Different foci
- ▶ Favorite measures
- ▶ Differing capabilities

Intervention

- ▶ **COMPLEX**
 - “Rehabilitation Program”
 - “Standard Therapy”
 - “Physical Therapy”

Defining the intervention



Interventions–Focused



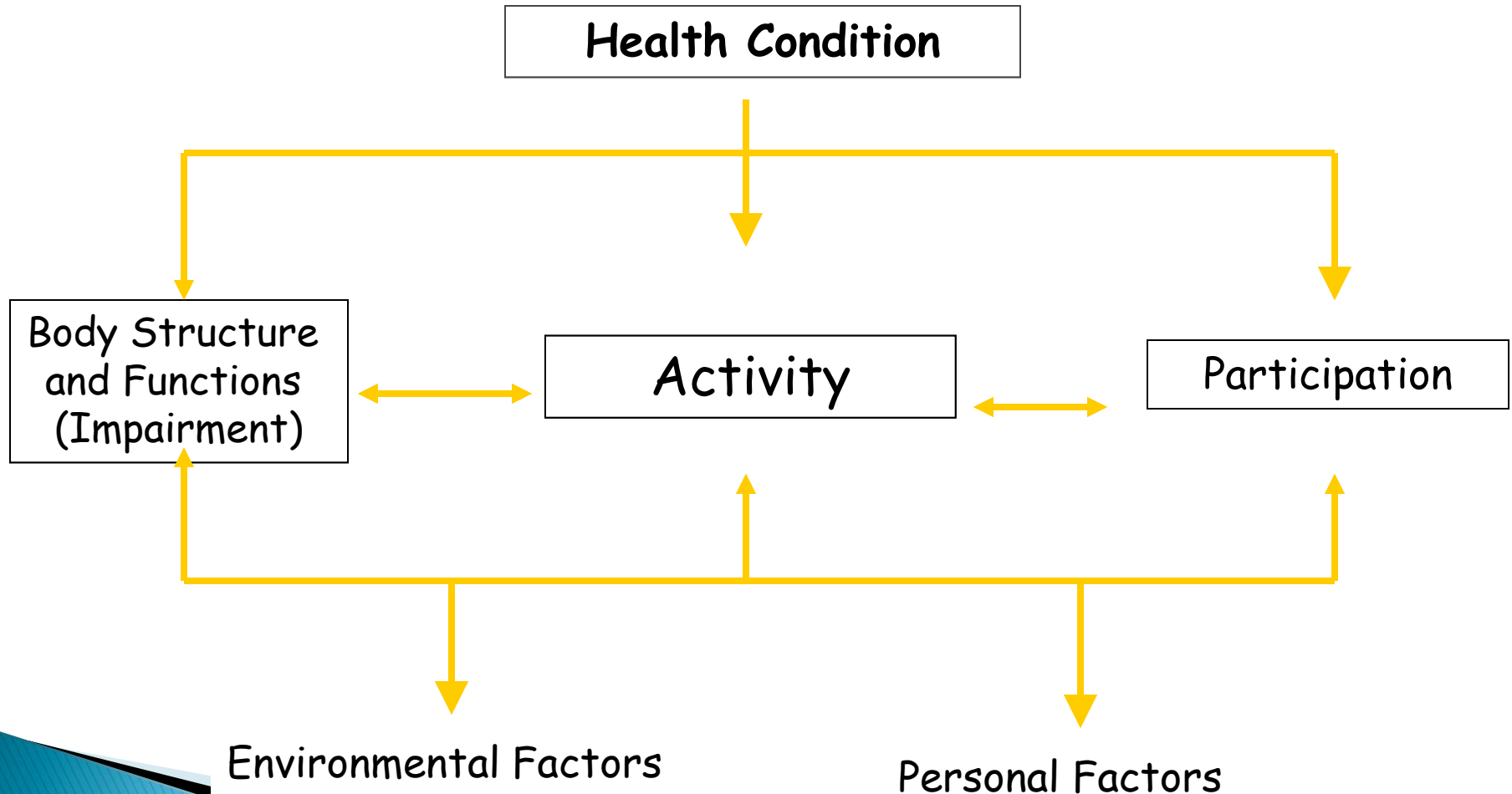
What is the control group?

Interventions--Medical

- ▶ Technique
- ▶ Dosage
- ▶ Complications of recruitment



International Classification of Functioning, Disability and Health (ICF) Framework (2001)



Negative Outcome

- ▶ No effect of intervention
- ▶ Or—Insufficient measurement technique
 - Ceiling and Floor effect
 - Is the measure sensitive enough?
 - Is it measuring the right thing?
 - The challenges of measuring quality
 - Of movement
 - Of experience
 - Of life

Quality of Life

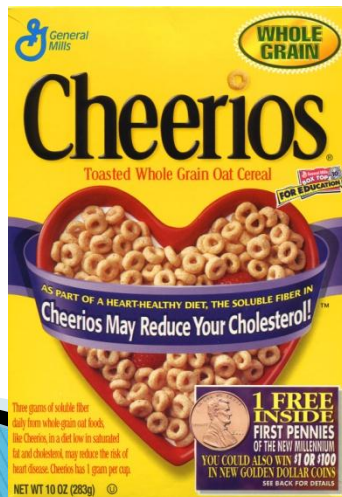
- ▶ QOL often found to be high
 - SPARCLE Study
 - Similar QOL between CP and TD
 - Pain differentiated
- ▶ Do interventions affect QOL
 - What is QOL based on?
 - How do interventions affect that?

LIFESPAN ISSUES:

What have we done to these kids?



- ▶ What are the long term effects?
- ▶ What are the desired outcomes?
- ▶ Lots of things happen in life
 - The Cheerios Project



Understanding Adults with CP



- ▶ Clinic Bias
- ▶ Busy adults
 - Complex data collections
 - Complex intervention programs
- ▶ Different treatment histories

Summary

