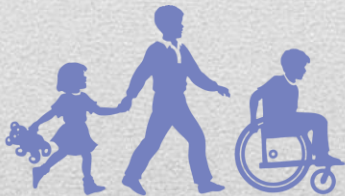


Practical considerations for the use of the **NIH Toolbox** in Down Syndrome research

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- Patients with Down Syndrome (DS) at high risk for sleep-related breathing disorders (SRBD)
- SRBD may be associated with depression and functional decline
- Study goal: examine the association between SRBD and depression with functional decline among adults with DS

Background

DS + depression

Adult patients
presenting to DS clinic
with depression &
functional decline

DS – depression

Adult patients
presenting to DS clinic
without depression and
functional decline

- Groups matched on age, sex, and BMI
- Study procedures:
 - Sleep study
 - EEG
 - Salivary cortisol
 - Neuropsychological testing *NIH Toolbox*

The Study

- 8 participants (50% male, 50% controls)
- Ages 18-31 (mean age = 24 years)
- Mean IQ = 47

- NIH Toolbox subtests used:
 - Dimensional Change Card Sort
 - Flanker Task
 - Picture Sequencing Memory
 - Picture Vocabulary
 - 9-Hole Pegboard

Study Progress

- Start points/routing
 - Level of education *does not work* for these participants
- Pace of stimulus presentation
 - Too fast for some
- Practice items
 - Picture Sequencing Memory
- Built-in ceilings
 - Allows for quick completion

NIH Toolbox Considerations

	Standard Score range	# incomplete
DCCS	52-69	2
Flanker	51-72	1
Picture Sequencing	50-77	4
Picture Vocabulary	59-80	4
9-Hole Pegboard	48-66	1

Variability
