Grab

Extend Your Reach
People Struggle with Reaching Items in US

**Common Thread:** Difficulty reaching low and high objects

31 M

2.8 M
Traditional Grippers Lack Natural Grasp

Random Object Orientations

Dexterity at Reach

Knobs and Handles
Grab

Extend Your Reach
Existing Technologies

- Input source for control system
- Reads EMG data from arm
- Detects hand motion
Grip Specifications

- Grabs many objects
- Pivots to change orientation
- Can turn knobs and handles
Extension Specifications

- Attaches to arm for natural motion
- Extends to reach objects
- Loads up to 7.5 lbs
Gripper Test

- Grabs water bottle
- Fails for smaller objects
- Requires too much power
Extender Test

- Reaches floor
- Difficult to actuate
- Cannot support large masses
- Switching to hinged arm
**Impact**

- Exceeds traditional grippers in dexterity at reach
- Higher quality of life for back pain and wheelchair patients
- Grants independence in daily tasks
Next Steps

- Extension via Hinged Arm
- Under Actuated Gripper
- Myo System Control