SAFE MOBILITY STRATEGIES AND ADAPTIVE EQUIPMENT

Julie Walker  
PT, DPT, NCS

Marlena Casey  
OTR/L, CLT
Please consult with an Occupational Therapist, Physical Therapist, Primary Care Provider, or another health care provider prior to purchasing equipment.

The Presenters have no disclosures or ties to any of the companies or products presented in the following presentation.
WHY DOES SAFETY MATTER?
**WHAT PERCENT OF PATIENTS WITH CEREBELLAR ATAXIA FALL PER YEAR?**

<table>
<thead>
<tr>
<th>Option</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>57%</td>
</tr>
<tr>
<td>B</td>
<td>74%</td>
</tr>
<tr>
<td>C</td>
<td>46%</td>
</tr>
<tr>
<td>D</td>
<td>83%</td>
</tr>
</tbody>
</table>

**Answer:**

<table>
<thead>
<tr>
<th>Answer</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>74%</td>
</tr>
</tbody>
</table>

*Ella et al 2010*
SAFE STRATEGIES FOR MOBILITY

- Change Something!!!
- With Yourself
- With the **Strategy** you use
- With the **Environment** you are in
WHAT CAN YOU CHANGE ABOUT YOURSELF?

EXERCISE!

Swimming

Stationary Bike

Walking
WHAT CAN YOU CHANGE ABOUT THE STRATEGY?

Plan out your movements

Quality of Movement not Speed!

Avoid Multitasking

Every time you stand up, stop and get your balance before moving
**WHAT CAN YOU CHANGE ABOUT THE ENVIRONMENT?**

Choose to sit in chairs you know you can get out of

- **YES**
- **NO**

Assess fall hazards

Store frequently used items at waist level

Keep an assistive device available
TUB TRANSFERS

Step 1

Step 2

Step 3
ASSISTED STAND PIVOT TRANSFERS

Step 1
Step 2
Step 3
Step 4
Step 5
Step 6
ASSISTED BED MOBILITY

Step 1

Step 2

Step 3

Step 4
TRANSFERS FROM FLOOR

Step 1

Step 2

Step 3

Step 4

Step 5
TRANSFERS IN AND OUT OF CAR

Step 1

Step 2

Step 3

Step 4

Step 5

Step 6
“Interventions were not aimed at changing underlying movement capabilities but instead were focused on devising strategies to integrate available movement and control in the most effective and efficient manner possible.” (Gillen 2002)
ADAPTIVE EQUIPMENT

- Adaptive Devices:
  - Stabilize
  - Control Degrees of Freedom
  - Decrease falls risk
  - Energy Conservation

- Assistive Technology:
  - Tremor dampening
  - Communication Devices
EATING

Weighted Utensils

Plate Guard

Cuff Silverware

Dycem

Rocker Knife

Adapted Cutting Board
EATING

1. Weighted Utensils
2. Plate Guard
3. Cuff Silverware
4. Dycem
5. Rocker Knife
6. Adapted Cutting Board
ASSISTIVE TECHNOLOGY
EATING EQUIPMENT

Liftware Spoon
- Active Cancellation of Tremor technology to stabilize an eating utensil
  (Pathak et al 2014) www.liftware.com

Obi Robotic Feeding Device
https://meetobi.com

Battery
Ultra-thin rechargeable battery will last for several days on a charge.

Multiple Attachments
Fork, soup spoon, keyholder, and more are coming soon.

Stabilizing Technology
Cutting-edge electronics will work to actively detect and stabilize your tremor.
KITCHEN DEVICES

Robotwist Hands
Free Jar Opener

Pot/Pan Stabilizer

Cordless Can Opener

Bottom-Drawer
Freezer
Refrigerator

Side Hinge
Oven Door
KITCHEN DEVICES

1. Robotwist Hands Free Jar Opener
2. Pot/Pan Stabilizer
3. Cordless Can Opener
4. Bottom-Drawer Freezer Style Refrigerator
5. Side Hinge Oven Door
LOWER BODY DRESSING

Sock Aide

Reacher

Clip and Pull Dressing Aid

Elastic Shoelaces/Coilers

Dressing Stick

Long-Handled Shoe Horn
LOWER BODY DRESSING

1. Sock Aide
2. Reacher
3. Clip and Pull Dressing Aid
4. Elastic shoelaces/coilers
5. Dressing Stick
6. Long Handled Shoe Horn
UPPER BODY DRESSING

Button Hook

One Arm Dressing Technique

Zipper Pull

Front Latching Bra
UPPER BODY DRESSING

1. Button Hook
2. One arm dressing technique
3. Zipper Pull
4. Front Latching Bra
BATHING

Soap on a Rope

Foot Brush

Wash Mitt

Long Handled Sponge

Removable Shower Head

Shower Chair
BATHING

1. Soap on a Rope
2. Foot Brush
3. Wash Mitt
4. Long Handled Sponge
5. Removable Shower Head
6. Shower Chair
GROOMING

Weighted Razor and Toothbrush

One Handed Nail Clippers

Denture Brush

Long Handled Brush and Comb

Electric Toothbrush

Height Adjusted Hair Dryer Stand
GROOMING

1. Weighted Razor and Toothbrush
2. One Handed Nail Clippers
3. Electric Toothbrush
4. Denture Brush
5. Long handled brush and comb
6. Height adjusted hair dryer stand
TOILETING

Toilet Buddy

Tongs

Raised Toilet Seat
WHERE TO BUY THINGS

- Amazon
  - https://www.amazon.com/

- Northern Pharmacy

- NC Medical
  - https://www.ncmedical.com/categories/Assistive-Devices-ADL_12839533.html

- Alimed
  - http://www.alimed.com/adls/
Questions?
REFERENCES


