Do-It-Yourself Adaptations for Easier Living with Physical Challenges

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Creative Tools for Accessibility

DIY "MacGyverisms" for the creative clinician

Identify Limitations

• Targeted population
  – Cervical spinal cord injury
  – Degenerative neuromuscular disorders (MS, GB, Stroke)
• Decreased hand function
  – Grip strength
  – Dexterity or coordination
• Decreased trunk control and balance

Identify Goals

• Patient-centered
• Improve immediate quality of life
  – Eating
  – Oral care, grooming
  – Phone / Tablet use
• When to compensate vs. remediate
  – Adaptations may be temporary
  – Focus on today
  – Reassure patient (that you are not ‘giving up’ on improvements)

Be Creative!

• Use resources
  – You Tube
  – Other clinicians
  – Ask your patient (often they are the best resource😊)
• Think outside the box (Find your inner MacGyver)
• Trial it yourself
• Trial and error: persistence

Tools for DIY Therapists
Build Your Own DIY Kit

- Velcro
- Dycem or Grip Solutions
- Built-up foam
- Coban/Friction Tape
- Splint material
- Sugru/Instamorph (Moldable plastic or rubber)
- Tongue depressors
- Yankar (hand held part of hose used during Suctioning)
- Heat Gun
- Rubber Bands
- Zip ties
- Twist ties
- Shelf liner
- Popsicle sticks
- Duct tape
- String
- Sewing Machine
- Plastic Dip
- Key Rings
- Camera Straps
- Loc Line (Modular/Flexible hose to hold items at any angle)

Areas Addressed in the Following Slides

- Easier Hold/Grab Ideas
- Feeding/Drinking Assist/Home Management
- Grooming Assist
- Bathing Assist
- Cathing Assist
- Dressing Assist
- Technology Assist
- PWC Driving/Seat Function Use Assist
- Bed Mobility Assist
- Recreation Assist
- Miscellaneous

Items to Increase Hold

- Gloves for Life
- Hatch Gloves

This did not hold up well for self propulsion

PWC = Personal Watercraft
Items to Increase Hold

Lap / computer tray or slide board or Phone Books placed on patients lap/knees improves position for folks w/ weak shoulders to access task at hand

On the market Lap trays / quick fixes
Drinking

**TERVIS SYSTEM**

**U Adapt Universal Handle**

**SIPPY Cup**
- Pros: Lidded, no spill, built in handle/straw and lightweight
- Cons: Handle small and straw is short

**Adding resistance via non slip type gloves**
**Adding resistance via non slip surfaces added to actual drink or cup**
- ie rubber bands, Grip Solutions or dycem

**Look for large loops in lids for easy thumb holds**
**Easy access flip top lids are spillproof and usable even w/ limited hand function**
Grooming/ Bathing

Easy elastic strap on net sponge
Found in the Men's Section

Thumb cut out on regular washcloth
Grooming

Hair Dryer Stands
Floor or Table Stands or Suction

Grooming Assist

Palm Hold Brushes (pet brushes)
Flat but Wide Styled regular brushes
Easy hold Brushes vs LH styles (heavier)
Fat Handled (regular non adapted brushes)

• Modifications for make up is as diverse as the makeup itself.
• Use of build ups and non skid materials overall work best to open screw top products and hard brushes.
• Velcro straps can be used to manage/keep hard to open compacts closed.
Self Cathing Assist

- Clothes can be modified
- There are several prefab clothing items on the market specifically designed for the higher injured.

Self Cathing Assist

- Wire assist to hold pants out for male cathing
- Barrette assist to hold Catheter tubing
- Prefab tools to assist with general cathing and Bowel Training

Self Cathing Assist

- Disposable slide clamps, pinch clamps, and roller clamps to possible assist with holding tubing
Self Cathing Assist

Catheter Holder

Self Cathing Assist

• ‘Rehab’ Zipper pulls
• Web style often found in camping sections
• Key rings
• Zip Ties (be care of sharp edges)

Dressing Assist

• Clothes can be modified
• There are several prefab clothing items on the market specifically designed for the higher injured.
Gloves for Life

Assist with pulling up pants

- Resistance gloves
- Loops on waistband
- Splint type hook to ‘catch’ waistband or loop

I usually try to avoid so all clothing does not need modified

Dressing Assist

Technology Assist

- Easy/light touch call bell assist
- Glass protection/bumpers stickers are great button build-ups

Any tool or means to make working the bed or call bell or phone easier will lessen patient stress

Glass protection/bumpers on buttons

Technology Assist

Magnetic Chargers
Technology Assist

Peeramid Book Pillow

Technology Assist

Suction mount (car window style)

Technology Assist

Velcro handhold

Technology Assist

• PWC Joystick operated Mouse / ECU
• Trac Ball Mouse
• Joystick Mouse
• Dragon Naturally Speaking
• Surface Pro has more Accessible options

Technology Assist
Technology Assist

- Reverse Locking Multi angle Mounts
- Loc Line Type Modular Mounts
  (www.modularhose.com)

Technology Assist

Phonecase w/ a clip.
Used the clip to attach to splint straps
Or w/o clip just velcro the phone itself to the splint straps

Technology Assist

Technology Assist

Technology Assist

Technology Assist
Use of a rivet glued to end of straw or clipping a small binder clip onto a pencil or dowel to create a 'fingernail' to assist w/ opening flip type items

Typing Assists

Low placement of items (preferably on lap) improves task assess for those with weak shoulders

Assist w/ obtaining /maintaining hold on phone
  • Use of a camera strap
  • Attaching a zip tie or wire loop on back of phone

W/C Adaptions

W/C Adaptions
W/C Adaptions

Bed Mobility Assist

Modified leg lifters

Miscellaneous

Many uses:
Assist w/ holding urinal or pants during cathing
Can attach to w/c and hang/hold anything
Door Access

Leisure

Cabinets & Drawers

Keys

- Use prefab adaptive key holders
- Add a metal plate or anything sturdy and large to existing keys to make it easier to hold
- Retractable key rings
- Coiled wrist key holders keep keys within reach

Keys

Reading, Writing Assist
In Summary:

- Let YOU TUBE be your friend
- Be creative and keep an open mind
- Realize that hopefully your quick fixes will only be a temp fix until your patient gets strong enough to complete without the gadgets. Like ‘training wheels’
- Share your resources/good ideas because people are always looking for them to help someone in need be more independent.

Think Outside the Box

Patterns are available upon request. For more information, please contact:

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