HELPING WHEELCHAIR USERS BE MORE PRO-ACTIVE IN THEIR SEATING SYSTEM.

WAYNE HANSON ANDY FOSTER - PS5.3 -
DON'T JUST SIT THERE

Sacral Kitty
When WE sit, WE will cycle through a series of movements to:

❌ Respond to the environment,
❌ Relieve pressure
❌ Prevent discomfort
❌ Keep busy enough to feed the neurotransmitter connection between our brain and the bodies.
WE CHANGE POSITIONS..

When WE want to

We don’t even need to think about it.
Helping Wheelchair Users

Change Positions

Stretch their back & legs

LEAN BACK & RELAX

Relieve Pressure

ALL BY THEMSELVES
SELF ACTIVATED
PELVIC TILT

Neutral  Posterior  Anterior
JUSTIN WILLIAMS

• AGE – 43
• PARA SINCE 1983
• L3 AND L4 INCOMPLETE
SELF ACTIVATED

PELVIC TILT
DAVID ROBERTS

Age – 59
In Wheelchair- 6 hrs. daily
Incapacitated- 39 years
Very little therapy

Stretch Out Those Limbs and Joints
* Hated Gym in High School
* Encouraged to Stretch Anyway

**Stretch Out Those Limbs and Joints**
YOU CAN DO MORE THERAPY RIGHT IN YOUR CHAIR?

Stretch OutThose Limbs and Joints
STEPHEN HAGER

AGE 31

ATHETOID CP

*Click on the image above to play*
NO REPOSITIONING NEEDED!

WHEN YOU MOVES
THE SEAT MOVES
**ANTERIOR POSITIONING**

**Reach Forward**

- An upright or slightly anterior position promotes active function.
- Helps break tone

PLAYING/WORKING
(Pelvis Anterior)
Rock Forward & Reach Out to Your Friends
ANTERIOR POSITIONING

*Click on the image above to play*

ANTERIOR
DYNAMIC Pressure Relief

ANTERIOR
DYNAMIC PRESSURE RELIEF

Neutral

Air Space

Compression

100% Relief

Posterior

Anterior
ARMS RESTS OFFER ADDITIONAL ASSISTANCE

*Click on the image above to play*
LEAN BACK & RELAX

All by Yourself
LEAN BACK & RELAX

All by Yourself
Dynamic Pelvic Tilt During Self Propulsion
“In an ideal world,” Pratt says, “we would be able to change angles, shapes and orientation throughout the day because sitting, in my opinion, is a dynamic activity and a lot of work. However in the wheelchair seated world, seat slope is not often changed during the course of the day. Seat slope in wheelchair seating is usually set at the time of ordering and/or delivery.”

- Sharon Pratt
INDEPENDENT MOBILITY / MIXING IT UP
ATTENDANT CONTROLLED
LOCKING/UNLOCKING MECHANISM

Locked

Unlocked
COMPLETE WITH GADGETS
PEOPLE WITH DISABILITIES ARE SOMETIMES TOO DEPENDENT ON THE CARE-GIVER to intervene to provide therapeutic support, prevent problems from occurring and maintain comfort.

Can We give Wheelchair Users more ownership over their Mobility and Positioning Needs?
Sometimes it is difficult for the Care-giver to understand and translate just how to fix the problem, when the person cannot or will not tell them what the problem is.
A PERSON WITH DISABILITIES SELDOM KNOWS WHAT THEY NEED THERAPEUTICALLY, but they do know when they feel pain, discomfort, are bored, if they would like to get your attention or if they want you to leave them alone.
LT CONFIGURABLE
SUSPENSION SEATING

CURVATURE CONFIGURATOR

Cervical
Thoracic
Lumbar

TRUNK SUPPORTS
HOW CAN THE PROBLEM BE SOLVED?

1) By the Care-Giver

2) By Themselves
HOW WE CAN GET DIRECT FEEDBACK?

1) Non-Verbal

2) Verbal
• **REACH JR**
  Chair with modified Hip Grip

Mounting modified to accommodate Anterior & posterior movement
WITH HIP GUIDES (NO HIP GRIPS)
NOTE: HIP GRIP STAYS IN NEUTRAL POSITION WHILE SEAT BACK OPENS UP AND SEAT RISES.
Note: Hip Grip follows seat when Stephen moves into anterior position
CURRENTLY AVAILABLE LITERATURE DOES NOT SUBSTANTIATE THE USE OF TILT TO IMPROVE POSTURAL STABILITY FOR FUNCTION IN CHILDREN WITH A NEUROLOGICAL DISORDER. EACH CASE FOR TILT IN SPACE SHOULD BE INDIVIDUAL AND METHODS AS OUTLINED IN THE RESEARCH MAY BE A USEFUL STARTING POINT FOR THIS PROCESS.”

PREPARED BY KAREN FERMIN AND MICHELLE WELLARD, SEPTEMBER 2002
This study was conducted to determine the effect of body orientation on upper extremity function in children and adolescents with cerebral palsy.

Performance time was lowest at the 0-degree orientation during the retest for the subjects with spasticity and highest at 15-degree anterior inclination during the retest for the subjects with athetosis. The results of this study show that orientation of the body in space affects upper extremity function and emphasizes the importance of positioning for maximizing upper extremity function.
CONCLUSIONS:

(i) The current literature is inconclusive, however there are indications that neutral and anterior seat inclines do positively affect function for children with cerebral palsy; (ii) Individual assessment of seating ability and need is advocated for these children rather than the adoption of a universal seat incline.

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