

The Ins and Outs of Manual Wheelchairs – Matching the Wheelchair to Your Life



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Interviewing
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Questions?



**To ask a question or make a comment,
please type it in the “Questions” box**

How to be the most active *and* comfortable in your wheelchair



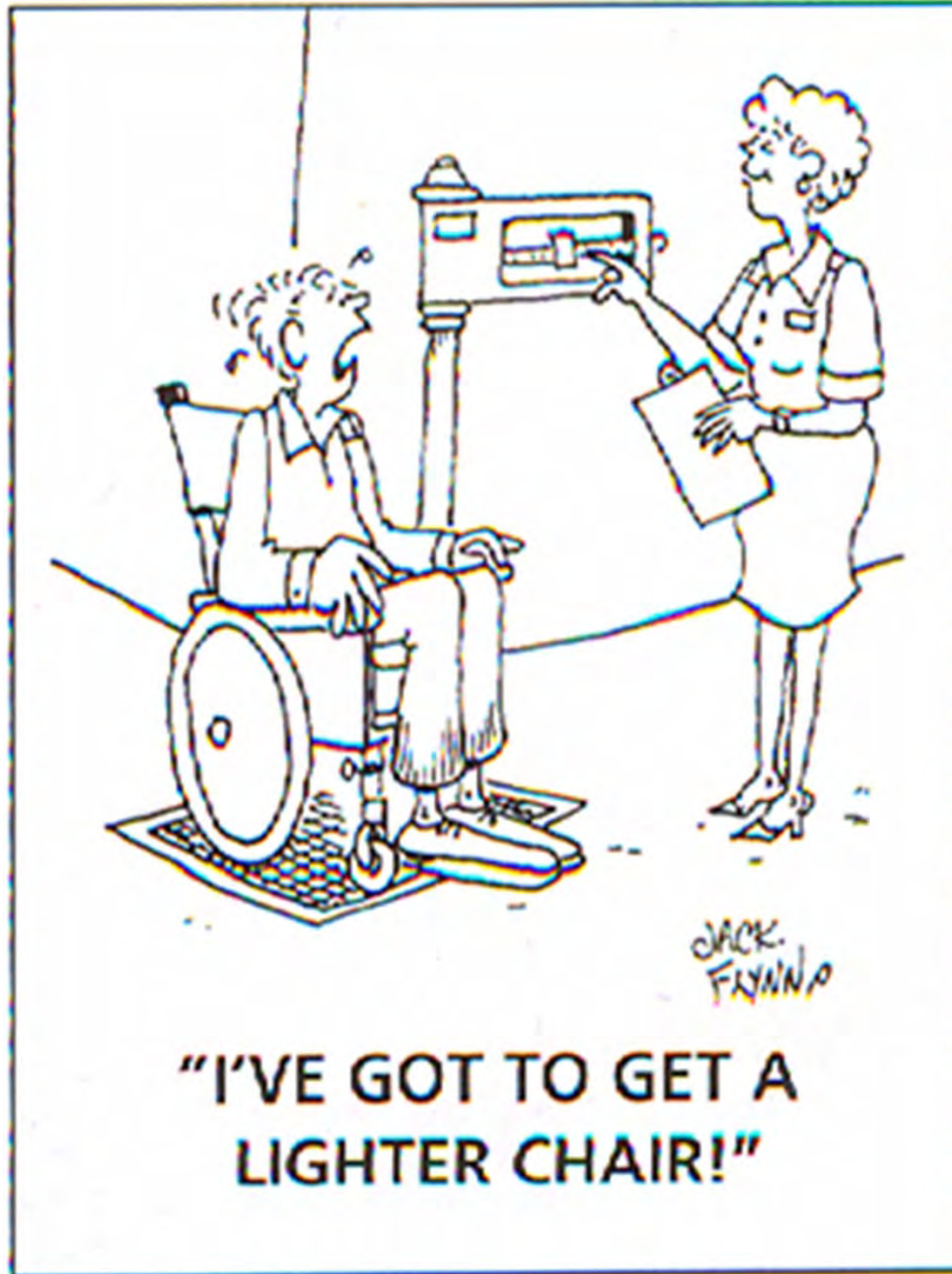
The Sport of Everyday Function



Balance and stability in all parts of your life



It's up to you to determine what is important
In your life!



**"I'VE GOT TO GET A
LIGHTER CHAIR!"**

**Total weight of the wheelchair
What you put on it will make a difference.**



Standard Manual Wheelchairs

Part-time, heavy (30lbs)
“Airport wheelchair”



**Your wheelchair should fit like a glove.
“My wheels are my legs.”**



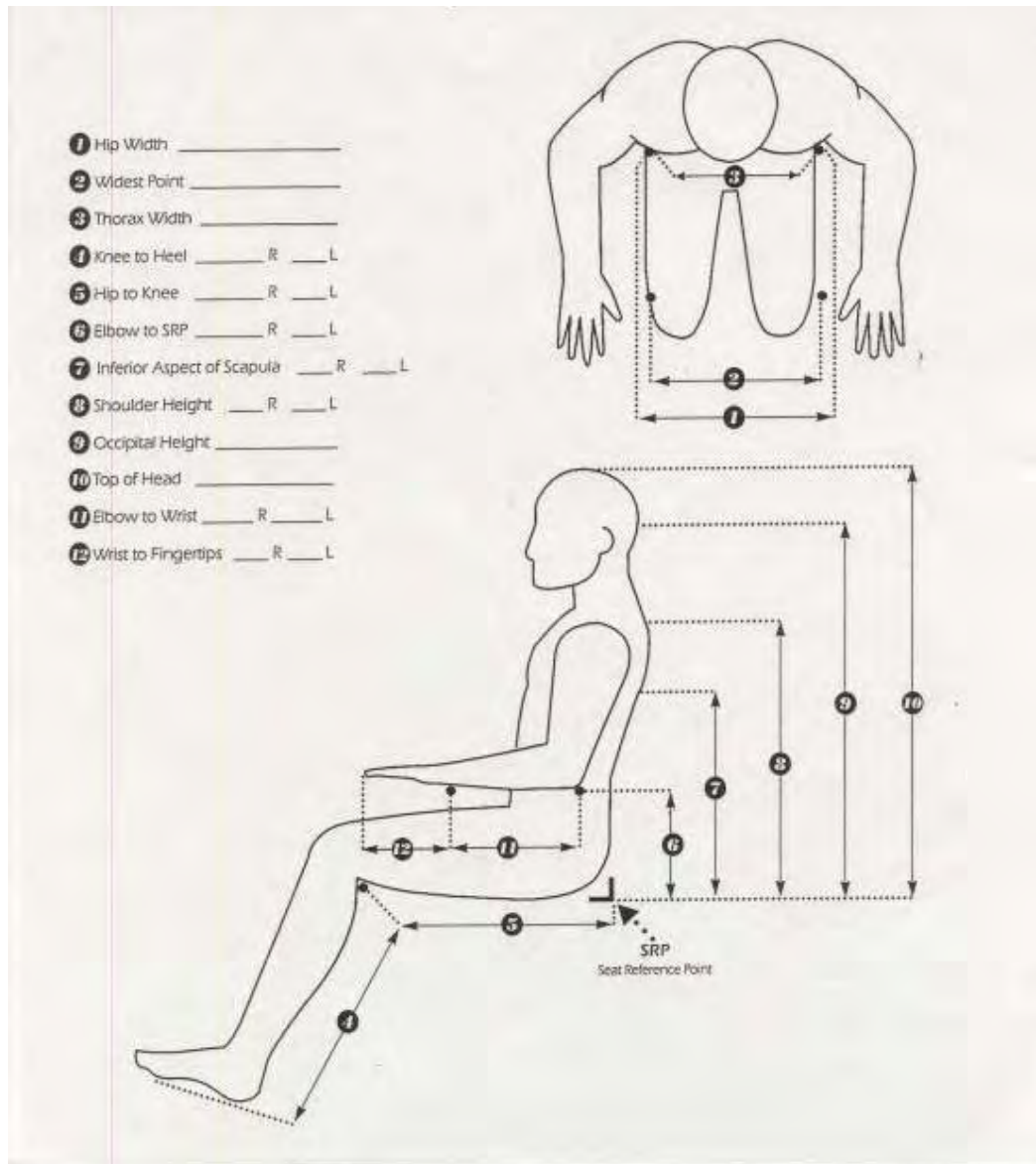
Ultra Lightweight Manual Wheelchair

Its not *all* about the weight

Adjustability is key!



Your Body Measurements

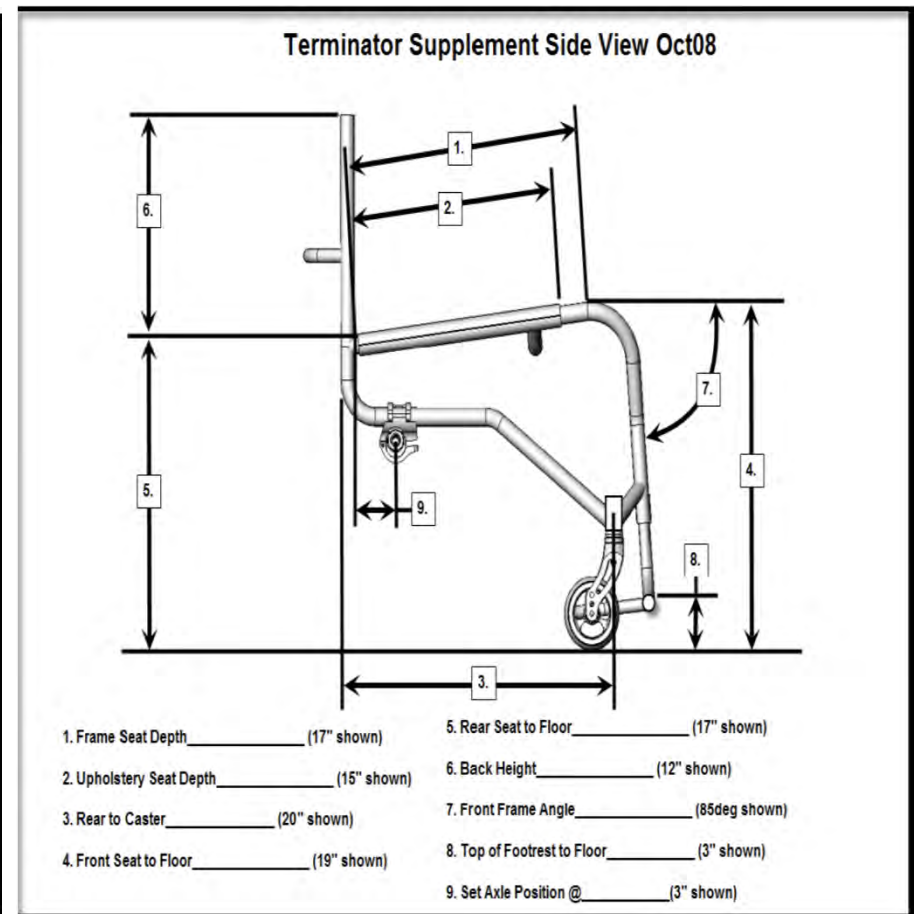
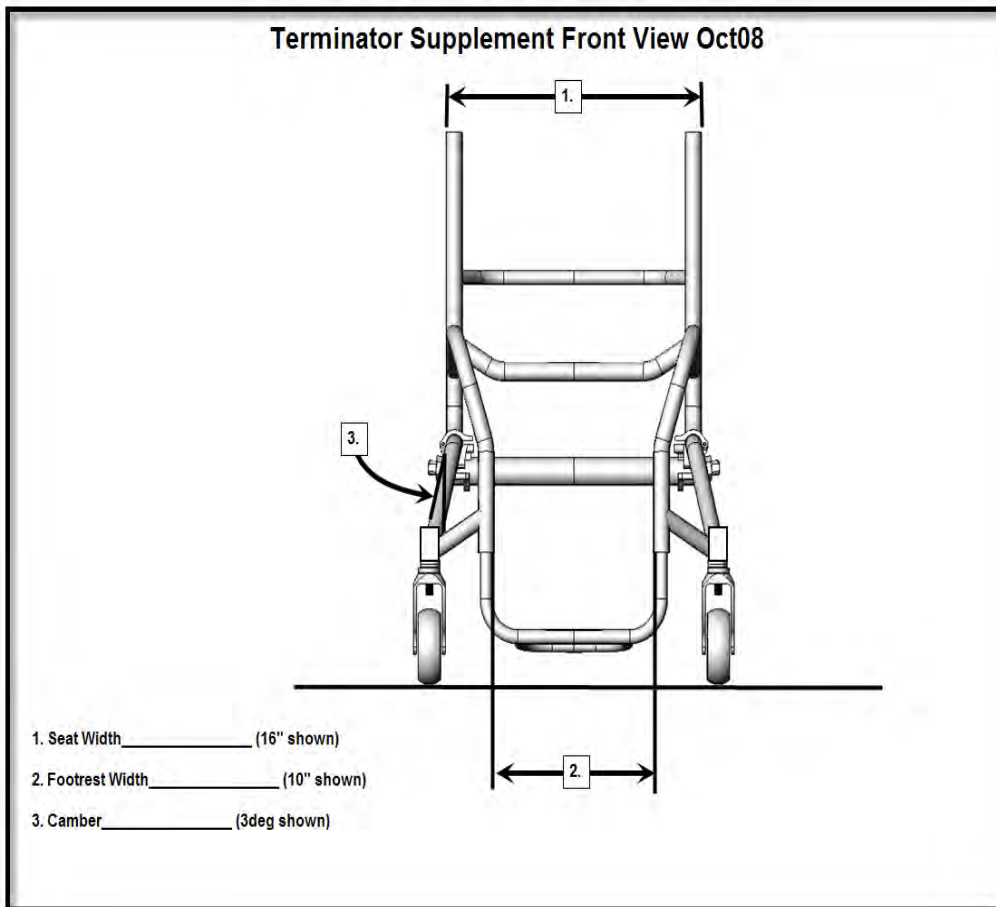


These measurements are usually Taken by a certified seating specialist An occupational or physical therapist with the credential of ATP – Assistive Technology professional.

You can find out more about this process on the UsersFirst Mobility Map

<http://www.usersfirst.org/resources/mobilitymap/>

Chair Measurements



Work with you wheelchair team: therapist (ATP), wheelchair supplier, (CRTS)

Folding vs. Rigid Frame



Folding Frame



Rigid Frame

Frame Design

- Box frame Vs. Open frame designs
- Adjustable frames Vs. Fixed frames
- Aluminum vs. titanium



Box frame



Open frame

Front Frame Angle



Why is this important?

Foot/Leg Position



Wheel Access



Wheel access and balance

Top dead center of handrim = elbow slightly flexed

Bottom of fingers at center of hub

2" to 3" seat slope to reach hub



Front Seat Height

Rear Seat to Floor Height



Rear Seat Height

Rear Wheel Position



Rear wheel should be used like a gear: the more wheel contact, the more efficient the push. (semi-circle push stroke)

Wheel position to hand

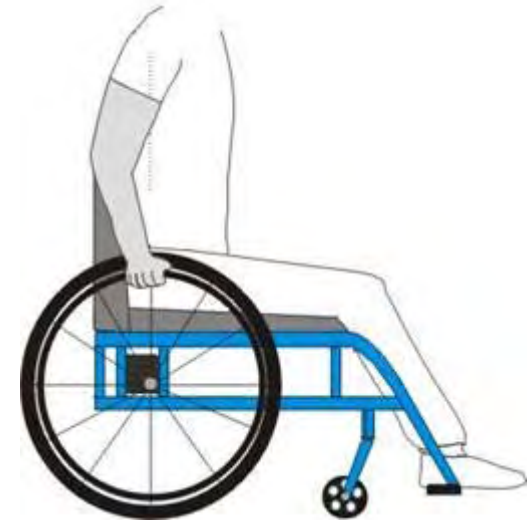
Seat too low



Seat just right



Seat too high



It is important the wheels be positioned where you can most easily push the chair.

Body measurements and lifestyle



Total height = the height of your knees
Important for: Driving, tables, desks, etc.



Seat width



Seat Width





Seat depth

Back height *and* angle





Camber



Camber = the top of the wheels are tilted towards your body

- Improves hand and arm access to the wheel
- Turns easier
- Makes the chair more stable
- Increases the width of the chair



Equipment Management and Maintenance

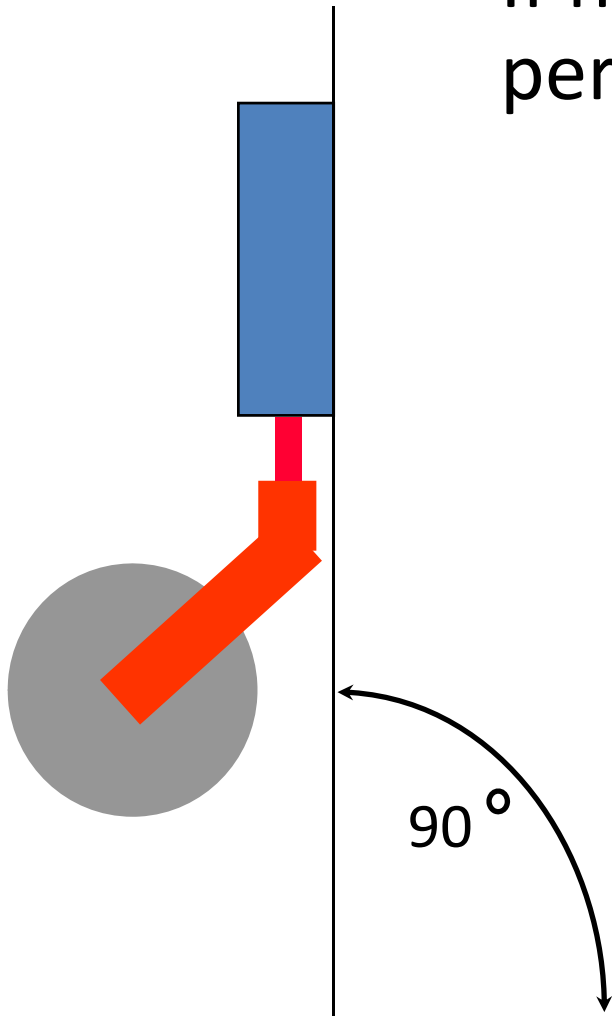
- Vehicle stow techniques for different style frames and abilities
- Rear wheel alignment
- Caster function-spin and swivel, housing alignment
- Equipment hygiene
- Check wheel alignment (with camber)
- Axle position
- Bent frame

Tire pressure!

- All these things can come out of adjustment – it is important to check them.

Housing Angle

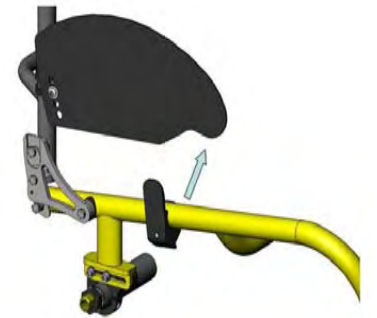
- Perpendicular to the floor
- If housing is not straight up and down, performance can be affected.



Accessories

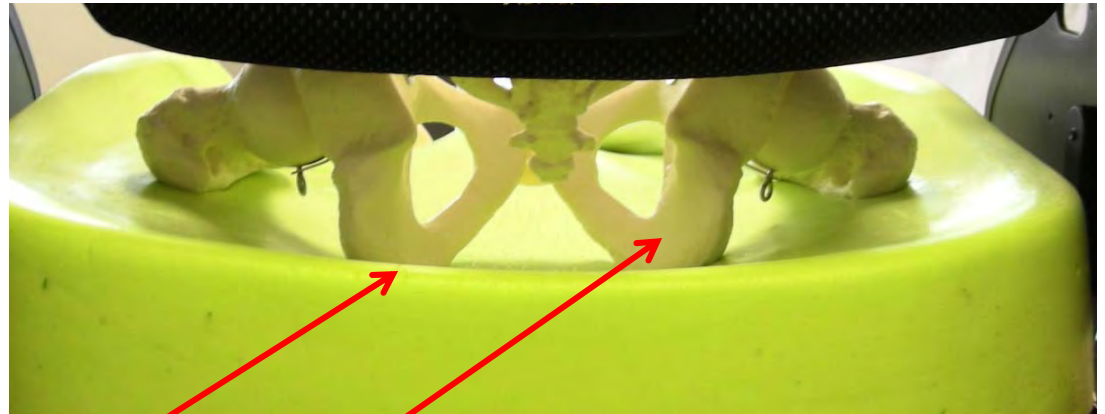
Everything matters, these can add weight and performance of you using your wheelchair

- Rims
- Tires
- Casters
- Forks
- Suspension
- Armrest
- Side guards
- Seating Systems
- Backpacks, luggage's carriers, and storage how it affects your positioning



Pelvic structure supported on the contours of the cushion

Note the accommodation for the ITs (the lowest boney part of the pelvis) and the raised support for the hip bones.



Tilt in space manual wheelchair



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Questions and Guidance



Top left corner “Ask Usersfirst”

Fill out the “My wheelchair checklist” at:

http://www.Usersfirst.Org/forms/wheelchair_checklist.html