Wheelchair Fitting and Measurement Guide
- Part 1
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The Six Basic Measurements

This guide provides six basic measurements to first consider when choosing a manual wheelchair that fits optimally for you. See below for guided instructions and considerations on these measurements. Please see Part 2 for additional wheelchair fitting measurements.

A. Seat width - In a seated position, measure the widest distance from hip to hip. Add on 1¼ - 2 inches to this measurement to allow a space between the armrest and each side of the hip.1,2

Considerations:
- The 1¼ - 2 inches added to the measurement allows room for clothing such as coats and prevents skin irritation between the thighs and the armrests.1
- If the wheelchair is too wide, it will be more difficult to propel, fit through doorways, and will not provide adequate postural support.2,3

B. Seat depth - In a seated position, measure the distance along the thigh from the back of the hip to the knee. Subtract 1-2 inches from the measurement to allow space between the back of the knee and the wheelchair seat.1,2

Considerations:
- If the seat depth is too long it may cause skin irritation and breakdown on back of the knees as well as poor postural support.1,3
- If the seat depth is too short, there will be less support under the thighs may increase pressure on the buttocks.1,3

C. Floor to seat height - While seated, measure the distance from the fold of the back of the knees to the bottom of the heel. Add on 2 inches to allow room for the footrests to clear the floor.1

Considerations: see next page
If the floor to seat height is too high:
  o The wheelchair will be difficult to fit underneath desks, tables, etc.
  o The feet will be unable to touch the floor when footrests are removed, making transfers and foot propulsion more difficult.\(^1\)\(^3\)
  o The wheelchair will also be more difficult to propel.\(^1\)
  o The wheelchair will be at increased risk of tipping.\(^1\)

A floor to seat height that is too low will cause the footrests to hit the floor and increase pressure on the buttocks when the feet are on the floor.\(^1\)

**D. Seat Back Height** - While seated with an upright posture, measure from the buttock to the bottom of the scapula. *Add or subtract inches* depending on how much postural support is needed - a higher seat back will offer more trunk support.\(^3\)\(^4\) In general, the seat back should not interfere with shoulder movements.

**Considerations:**
- If the seat back is too high, it may cause poor upper trunk posture and not allow for full shoulder range of motion to propel the chair.\(^1\)\(^3\)\(^4\)
- If the seat back is too short, it will promote poor posture and inadequate trunk support.\(^1\)\(^4\)

**E. Armrest Height** - With the elbows bent to 90 degrees, measure the distance from the buttocks to the tip of the olecranon process of the elbow (E). *Add 1 inch plus the height of the cushion* (if a cushion is being used).\(^1\)

**Considerations:**
- Armrest height promotes upright posture with the shoulders in a neutral position.\(^2\)\(^3\)
- If the armrests are too low, they will promote poor, leaning forward posture.\(^1\)\(^3\)
- If the armrests are too high, they may put pressure on the elbows and/or cause impingement at the shoulder.\(^2\)\(^3\)

**F. Backrest Width** - While seated, measure the width of the chest at the level of the top of the backrest. *Add 3/4 inch* to this measurement.\(^1\)

**Considerations:**
- If the backrest width is too wide, it will interfere with the shoulders’ ability to push the wheelchair and will not offer adequate postural support.\(^1\)\(^3\)
- If the backrest width is too narrow, it may cause skin irritation and/or discomfort.\(^1\)\(^3\)

**References**