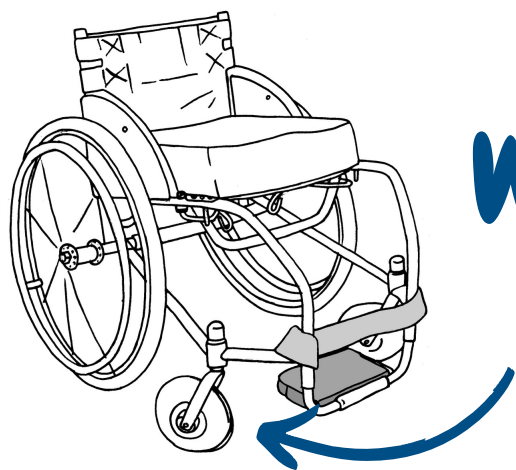




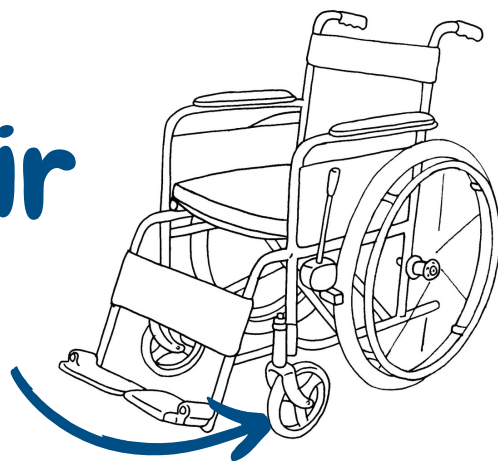
# HOW DOES CASTER QUALITY

## AFFECT USER'S DAILY LIFE?

Nearly one-third of wheelchair failures are experienced by casters that fail within 6-12 months of use and can cause bruises or injuries to users.



# Wheelchair Casters



The material, size, shape, tolerances and coating of different caster components mainly, caster bearings, fork, tires and wheel constitute a caster's quality. Standardized testing can assess quality and provide caster selection guidelines for reliable use.

## CHOOSING CASTER TIRES BASED ON USE:

### ROUGH TERRAIN

Use wide, softer polyurethane or pneumatic tires with a bevel

### SMOOTH SURFACES

Use narrow tires with tread

### ADVERSE ENVIRONMENTS

Use tires with greater depth

## CHOOSING CASTER WHEEL DESIGN:

### Lightweight Casters > 6in. or 120mm diameter

- Prevent flutter with shorter fork trail
- Have lower rolling resistance
- Are suitable for beginners

### Casters < 6in. or 120mm diameter

- Are less susceptible to flutter
- Provide clearances for footrests
- Are suitable for experienced/active users



# HOW CAN I LEARN MORE ABOUT CASTER QUALITY & SELECTION?

## START WITH STANDARDS & GUIDELINES

ISO 7176-32

ISWP Design  
Considerations

### CHOOSING CASTER BEARINGS:

Precision-ground, sealed bearings are recommended with

- Greater load bearing capacities & tighter tolerances
- Biweekly maintenance to avoid corrosion, contamination and degradation

### CHOOSING CASTER FORKS & FASTENERS:

- Powder-coated forks with at least 1/4in. or 6mm thickness
- Use spacers between fork prongs and axle bearings to maintain tolerances
- Use axle bolt having a shank of proper length and avoid the prong resting on the bolt threads
- Use Grade-8 or higher stem bolts of 1/2 in or 120mm and axle bolts of 5/16 in or 8mm

**RECOMMENDATION:** Choose a caster design after trying out the wheelchair with a new client outside of the clinic and evaluating the ease of use, comfort and balance.

### How do I benefit from information on caster quality and standards, if I am a...



#### WHEELCHAIR USER

Wheelchair users can learn how caster features and maintenance affect wheelchair use and health



#### MANUFACTURER

Manufacturers can develop or improve design based on standard caster testing



#### HEALTHCARE PROVIDER

Clinicians can learn about caster selection based on user needs and use conditions.



#### POLICY MAKER

Policy makers can adopt standards to ensure high quality casters are used to avoid user injuries

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