Making Sense of Wheelchair Tyres and Tyre Pressure

Choosing the right tyres for your wheelchair...

by
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Choosing wheelchair tyres shouldn’t be so complicated!

There are several types of tyres prescribed and used by wheelchair users available in the market. Much like any other manufactured goods, wheelchair tyres come in a variety of forms and characteristics to meet the needs of each user. So, how does one know which tyres will perform the best for an individual’s needs?

While there are no set rules on how one must choose his/her wheelchair tyres, we feel that the following factors should be considered before deciding which tyres best suit you.

### Factors to Consider in Wheelchair Tyre Selection

1) **Tyre Structure**
   Wheelchair tyres can be classified largely into two categories with variations: **solid** or **pneumatic**. The advantages of solid over pneumatic tyres are their **durability** and **puncture resistance**. Pneumatic tyres, on the other hand, are generally **lighter** and offer a more **cushioned ride** and **better traction** compared to solid tyres.

2) **Cost**
   As shown on **Table A**, the initial costs of purchase vary significantly among different wheelchair tyres. However, the cost of replacement and maintenance depending on the durability and puncture resistance of the tyres should also be considered.
3) Rolling Resistance
Solid tyres, in general, have higher rolling resistance (i.e. require more energy to roll) than do pneumatic tyres. The graph (see back page) shows the difference in rolling distance among some commonly used tyres at different tyre pressures. Since pneumatic tyres lose, on average, 25% of their original pressure in the first two weeks and 40% in four weeks, it is important to maintain your tyre pressure properly. You need at least 50% of the recommended tyre pressure to prevent a significant increase in rolling resistance. This means regular re-inflation of your wheelchair tyres every four to six weeks, depending on the tyres you have.

Difference in Roll Distance
(Fully Inflated vs. Flat Tyres)

Full = 100% recommended pressure
Flat = 25% recommended pressure
Check your tyre pressure REGULARLY!

Keep them well inflated!!

The information on this pamphlet is based on our wheelchair tyre study (summer, 2002) and G.F. Strong Rehab Centre’s Wheelchair Selection Manual.

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