



SUKRITAVAANI

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Dear Friends,

Greetings from Sukriti!

"I want to buy a wheelchair, but I don't know how to go about it."

This is a question we hear often at Sukriti. So, this edition of **Sukritavaani** focuses on wheelchairs—how to choose one, and why it matters. It's the first of a two-part series on this important topic.

Let me share my own journey.

Though I've been a full-time wheelchair user for five years, I only bought my first chair in 2018. For years, I resisted it—believing that using a wheelchair meant giving up. I pushed through with calipers and crutches, avoiding social life and limiting my movements to essentials.

Everything changed at my friend Mr Kalyanaraman's daughter's wedding. I was excited and was looking forward to being there —outfit and accessories ready for every occasion, leave sanctioned, everything planned. To my utter surprise the venue's slippery floor made it impossible for me to walk so much so that I had to skip the reception. That day, I realised something had to change.

Encouraged by my dear friend Dr Aiswarya Rao, I finally invested in a premium wheelchair—and it transformed my life. From barely using it, I now rely on it daily. It has taken me across India and the U.S., and brought freedom back into my life.

To anyone out there unsure about taking that step—know this: a wheelchair is not a symbol of defeat. It is a gateway to freedom.

Now coming to our work at Sukriti, the month of May has been a busy and fulfilling one, thanks to the summer vacation period.

We reached out to 67 children with much-needed orthopaedic aids and 23 children received physiotherapy sessions. Two of the children have shown such remarkable improvement that the parents are now considering putting them in regular school. It's these small but meaningful milestones that bring us deep satisfaction and reaffirm the purpose of our work.

Your support makes all this possible. Thank you for walking with us on this journey toward inclusion, dignity, and brighter futures for every child.

With best regards
Sowmya Simhan

Part 1: Choosing the Right Wheelchair: What You Need to Know by Pritish Patri

In the era of AI the field of Physical Medicine and Rehabilitation has also been achieved a continuous progression due to the rigorous research and efforts. We all know that a wheelchair is one of the most important assistive aid to improve the quality of life for people having physical impairments. It is therefore very much essential to select an appropriate and user-friendly wheelchair. For selecting and using a proper wheelchair, we have to get the help of a certified rehab professional. A thorough wheelchair assessment helps identify the right wheelchair that meets the user's needs, ensuring it fits well and provides proper comfort based on the user's height, weight and disability.

There are different types of wheelchairs, which can be classified into the following main categories:

1. Manual Wheelchairs

Operated by the user or pushed by a caregiver, these are lightweight and often foldable. Ideal for short distances and users with sufficient upper body strength

Pros:

Lightweight and easy to fold for transport

No need for batteries or charging

Affordable and low maintenance

Cons:

Requires upper body strength or assistance

May cause fatigue with prolonged use

2. Powered (Electric) Wheelchairs

Battery-operated and controlled using a joystick or other assistive devices. Suitable for users with limited mobility or strength.

Pros:

Ideal for users with limited strength or endurance

Easier to maneuver over long distances or rough terrain

Can be customized with advanced controls (joystick, head control, etc.)

Cons:

Expensive and heavier

Requires regular charging and battery maintenance

Less portable

3. Transit (Travel) Wheelchairs

Lightweight with smaller rear wheels, designed to be pushed by a caregiver. Ideal for travel and short-term use.

Pros:

Very lightweight and compact

Easy for caregivers to push and lift

Great for short-term use and travel

Cons:

Not suitable for self-propelling

Less comfortable for long-term use

4. Reclining and Tilting Wheelchairs

Offer various backrest and seat positions to reduce pressure and provide comfort, especially for users who need to stay in the wheelchair for extended periods.

Pros:

Offers pressure relief and comfort for long durations

Helps in posture management and reducing the risk of sores

Easier caregiving for certain users

Cons:

Heavier and more expensive

Not as easy to transport

5. Sports Wheelchairs

Customized for athletic activities like basketball, tennis, or racing. Lightweight, with a design focused on speed and agility.

Pros:

Designed for high performance and agility

Lightweight and customizable for specific sports

Promotes active lifestyle

Cons:

Not suitable for everyday use

Can be costly and requires a separate daily-use wheelchair

6. Standing Wheelchairs

Allow users to move from a seated to a standing position, promoting circulation, bone health, and independence.

Pros:

Allows user to stand, promoting circulation and bone health

Increases independence and interaction at eye level

Supports pressure relief

Cons:

Very expensive

Bulky and heavy

Not suitable for all users

7. Customized or Adaptive Wheelchairs

Tailored to meet individual medical or functional needs, often involving special seating, controls, or frames.

Pros:

Tailored to the user's exact needs and body measurements

Can include advanced positioning, seating, and control systems

Improves comfort, function, and long-term health

Cons:

Expensive and time-consuming to fabricate

Difficult to adjust or re-use for others

Factors to consider while choosing a wheelchair

■ Disability type, Severity and Activity level:

A wheelchair can be selected as per the user's disability type and severity.

For example those are having a very less upper body strength may use a powered wheelchair while those are having moderate to sound upper body strength can go for a manual wheelchair. A person with more activity level may be recommended a sport wheelchair.

■ Environment:

The type of wheelchair chosen is crucial and should be based on whether it will be used primarily indoors or outdoors, as well as the specific terrain it will be used on. For rough and uneven terrains, a sturdy wheelchair with larger wheels and suspensions is recommended for added support and stability. For indoor use, a pneumatic wheelchair is ideal for smooth movement. At times, modifications might be necessary to improve the wheelchair accessibility of the built environment.

■ As per the occupation:

Depending upon the occupation we can select a light weight or heavy duty wheelchair. Some occupations like teachers may need a standing wheelchair.

■ Proper size and fitment:

Precise measurements are crucial for ensuring the right size and fit of the seat. The seat width should fall within the range of 16 to 20 inches, which can be slightly wider,

about 1 to 2 inches, than the hips. When it comes to seat depth, there should be a distance of 2 to 3 fingers (around 2 inches) between the front edge of the seat and the back edge of the knee. The seat height should be between 19.5 to 20.5 inches, and there should be enough space under the footrest for proper foot clearance. An ideal back height for the user is around 16 inches. Any height greater than this may limit shoulder movement, while a height lower than this may impact back stability.

■ **Comfort and Cushioning:**

We need to choose a cushion that provides good support and helps to prevent pressure sores. The wheelchair should have reclining features for extra comfort with adjustable seat height, arm rest and foot rest.

■ **Weight bearing capacity:**

Weight bearing capacity varies among different types of wheelchairs. A standard manual wheelchair typically has a load capacity of approximately 127 kg, while heavy duty or Geriatric wheelchairs can support up to 150 kg.

■ **Materials:**

In the construction of wheelchairs, the frame material option typically includes steel, aluminum, or titanium. A steel frame is considered cost-effective but heavier than aluminum and titanium frames. The wheelchair wheels can be constructed using either rubber or polyurethane tires for improved durability.

■ **Mobility and Portability:**

Manual wheelchairs:

When choosing a wheelchair, it's important to consider both portability and your mode of transport. A lightweight, foldable wheelchair is ideal for easy mobility and handling. If you frequently travel by cab, keep in mind that most services like Uber and Ola operate on CNG or LPG, which means the car's boot may have limited space due to the fuel tank. Many standard wheelchairs do not fit in such cars. If you prefer travelling by auto-rickshaw, opt for a wheelchair with a detachable footrest and a collapsible backrest—this makes it easier to accommodate in the limited space available.

Powered Wheelchair:

Powered wheelchairs are ideal for individuals with severe impairments, but they tend to be quite heavy. Lifting and placing them into a vehicle usually requires more than one person. However, if the vehicle is equipped with a ramp or a hydraulic lift, this challenge can be easily managed.

■ **Cost effective:**

Finally it should be affordable for the user's pocket with a good quality of product. We have wheel chairs ranging from Rs 6000 onwards. Higher the price, more the comfort and better the quality of life.

Before selecting a wheelchair, it is highly recommended to consult a qualified rehabilitation professional. They can help determine which wheelchair is best suited to the user's needs. Wherever possible, the user should try out different models to assess comfort and get a real sense of how each wheelchair feels before making a purchase. Most importantly, users must receive proper training—not only for effective and safe mobility but also for the regular maintenance of their wheelchair.

Author is a Sr. Prosthetist and Orthotist (Wheelchair specialist) at the College of Occupational Therapy, Faculty of Medicine and Health Science, SRM IST, Tiruchirappalli



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getintouch@sukriti.org

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