STAIR CLIMBING WHEELCHAIR

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For some this is the Everest
help build more facilities adapted for disabled people

http://i.dailymail.co.uk/i/pix/2014/03/03/article-0-1BFF49A100000578-672_634x810.jpg
ACCESSIBILITY

STAIR-CLIMBING WHEELCHAIR

- INDEPENDENCE ibot Mobility System
- Dean Kamen
- Gyroscope
- FDA approved stair-climbing wheelchair on August 13, 2003

http://www.huey091foundation.org/portals/0/Images/huey/ibot.jpg
Climb up the stairs
Reach high shelves or hold eye level conversations
Travel through many types of terrain
iBOT video

http://www.mindfully.org/Technology/2003/Wheelchair-iBOT13aug03.GIF
A network of clinicians

Pre-qualification, no-cost test drive

Clinical assessment

Reimbursement

Delivery training
Table I. Contraindications and precautions for use of the iBOT® Mobility System.

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>The person and the items carried weigh less than 75 lbs (34 kg) or more than 250 lbs (113 kg); additional items carried weigh more than 20 lbs (9 kg). The person is unable to use a wheelchair seat between 14 and 20 inches wide (356–508 mm).</td>
</tr>
<tr>
<td>Hand function</td>
<td>The person does not have sufficient hand function to dial a push-button telephone or operate a hand-operated joystick.</td>
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<tr>
<td>Hips/Knees</td>
<td>The person is unable to bend the knees such that the feet fit on standard footrests. The person is unable to bend the hips enough to sit in a standard wheelchair that does not recline.</td>
</tr>
<tr>
<td>Seizure</td>
<td>The person has lost consciousness or had a seizure in the previous 90 days.</td>
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<tr>
<td>Posture</td>
<td>The person needs a tilt or recline seating system for pressure relief or for activities of daily living. The person requires postural supports that are not compatible with the postural supports available on the iBOT®.</td>
</tr>
<tr>
<td>Medical</td>
<td>The person has a requirement for respiratory equipment to be mounted on his/her mobility device. The person has severe osteoporosis, osteogenesis imperfecta, or metastatic bone cancer.</td>
</tr>
<tr>
<td>Stair solo function</td>
<td>The person reports a history of cardiac impairments that limit his/her ability to perform ordinary physical activity. The person is unable to grasp and hold a handrail with both hands. The person is unable to adequately shift their weight forward and backward to control the stair climbing activity.</td>
</tr>
</tbody>
</table>

“iBOT has opened up my life. I can pretty much go anywhere I want.”
“it is the next best thing to walking.”
“It overcomes the psychological barrier related to places.”

“Mobility is one of the central necessities of health and human existence.”

“The users highly valued using the iBOT to enhance their community access and social interaction.”

Elevates the user’s seat, travel rough terrain (rather than stair climbing function)

CONCERNS

- Too big (a second device)
- Expensive ($25,000-$30,000)
- Stair-climbing function is challenging (use of one arm and upper-body control, unfamiliar setting)
- Fear of wear and tear

- In 2009, iBOT was called off (failed to sell more than a few hundred a year)
New iBOT
We want to change society (social model)
Disability is not an individual’s problem.

http://www.nbcnews.com/id/30929301/ns/health-health_care/t/stair-climbing-wheelchair-comes-halt/#.VGrKAbd0xdg


http://arthritis.about.com/cs/assist/a/stairclimbwbc.htm

http://en.wikipedia.org/wiki/IBOT