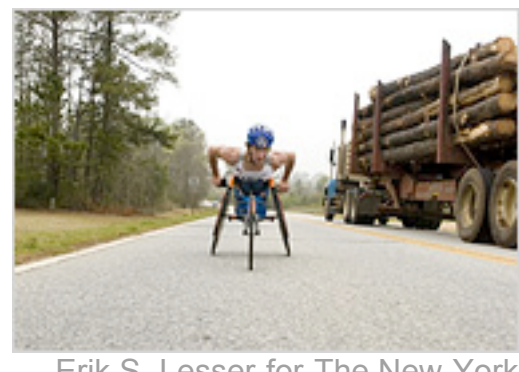


A Blur of Hands, Spokes and Determination

By ALAN SCHWARZ
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WARM SPRINGS, Ga. — It happened every few miles during Josh George's 45-minute workout through the hills of middle Georgia. A car or truck driver would slow to a tentative crawl, spend 10 to 20 seconds deciding whether it was rude to pass, and after creeping over the double-yellow would rubberneck at the young man stuffed into a racing wheelchair huffing and puffing his way across the asphalt.

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Erik S. Lesser for The New York Times
Josh George is a top medal contender in the Paralympics and could draw the public's attention to his sport.

They saw. But if they had heard.

"Heinz Frei!" George's training partner implored over her own gasps for breath.

"Heinz Frei!" More gasps.

"Heinz Frei!"

Heinz Frei of Switzerland has been considered the world's premier wheelchair racer — but won't be much longer if George completes his climb. Still a baby of 24 by the standards of his sport, George has established himself as one of his sport's best, having held two sprinting world records and won several major marathons. He will head to the 2008 Paralympic Games — held in Beijing two weeks after the Olympics — with the ability to win not just a slew of medals, but perhaps the attention of an American public that barely knows the sport.

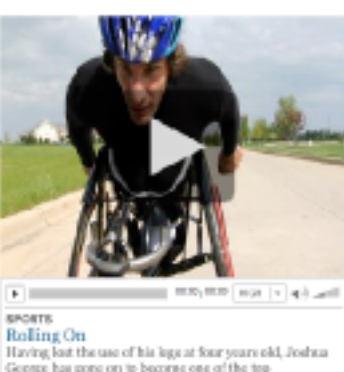
With a Huck Finn grin atop a weight lifter's shoulders, and sweaty curls straight out of a Mountain Dew ad, George is equal parts oh-boy Virginian and oh-man athlete. Because he already is so good, so young — wheelchair racers typically reach their competitive peak as late as their mid-30s — George is a budding star in wheelchair racing, and easily the United States' top Paralympic medal contender in races from 100 meters up through the marathon.

But as he travels around the world for competitions, rolling through airports pushing his three-wheeled, state-of-the-art racing chair, the quizzical looks and saccharine comments remind him of the distance still to be traveled.

"You tell them, 'I'm a wheelchair racer,' and they'll say, 'Good for you!' like, 'Good for you, you're getting out of the house and doing something,'" said George, who graduated with honors from the University of Illinois last year and still trains primarily in Champaign. "It's not, 'How'd you do at the last race?' You don't get taken as a serious athlete a lot of the time. People don't quite understand exactly what goes into it."

Wheelchair racing is far from a glorified soap-box derby, but rather an intricate test of athletic strength, endurance and strategy among athletes whose propulsion comes from arms atop wheels rather than legs atop sneakers. And although his sport immediately advertises physical limitations, George excels partly because some of his physical restrictions have led to some spectacular physical gifts.

George has been paralyzed from the midchest down since he fell out of a 12th-story window when he was 4. The accident — which shattered his legs, dislocated his hips and damaged his spinal cord — required surgeons to insert pins in George's hips, impeding his leg development, and later led to a fusion of his spine, which stopped his slow growth altogether at 14. He now weighs 98 pounds with legs the size of a 6-year-old's. "I got hit kind of hard in the growth department," he said proudly.



Erik S. Lesser for The New York Times
George's strength — he can bench-press 220 pounds although he weighs 98 pounds — helps him power his wheelchair to 23 miles per hour.

Determined to be an athlete while growing up in Herndon, Va., George developed his upper body to the point where today his shoulders ripple out of his shirts, he can bench-press 220 pounds, and he can do dips (forms of pull-ups on parallel bars) with 100 pounds strapped to his back. That sheer strength, as well as the pushing motion that is so ingrained in his joints — many competitors weren't hurt until their teens or later — leaves George with an off-the-charts power-to-weight ratio that is crucial to acceleration. Add to that the dexterity to hit his wheel rims at maximum power up to 140 times a minute during sprints, lungs strong enough to handle marathons on consecutive weekends and an eat-my-dust competitive verve, and George could soon dominate wheelchair racing.

"He's doing everything right at the moment," said David Weir, 28, one of George's top rivals from Britain and the winner of last month's London Marathon. "He's a very talented young athlete that's going to go far in his sport. If it all comes together at once, he's going to be outstanding."

George's stroke is honed with the help of sophisticated analysis. At a recent training camp, slow-motion software mapped every split-second of the cycloid technique: the impact of gloved hand to rubber rim at about 2 o'clock on the wheel face; the .083 seconds of contact during which hundreds of pounds of force push down; the release of the hand at approximately 5:30, just as the arms are almost stretched to maximum length; the rising up to ready-to-push position with actions and breaths similar to a butterfly swimmer's; and then impact all over again.

At full speed, powering the chair up to 23 miles per hour, it's the frenzied flutter only a hummingbird could appreciate. Yet delicate it is not. As George pointed at some of the statistics on a projector screen, he unwittingly advertised his sport's battle scars — his fingers were bruised purple, and the undersides of his elbows were streaked with burns.

"If a doctor said a magic pill could probably let me walk again, I wouldn't take it," said George, who has won three Chicago Marathons. "I've worked very hard to be who I am."

George has held world records in the 100-, 400- and 800-meter distances, and swept the 100, 200, 400 and 800 races at the 2006 world championships. He will compete in all four of those events in Beijing, as well as the 1,500 meters and the marathon, the sport's most prestigious races. George also could have played guard for the United States wheelchair basketball team, but declined so he could concentrate on racing.

Other wheelchair racers marvel at how George is able to compete so well against athletes with injuries less severe than his; most of his competition is paralyzed from lower down or not at all, allowing them stronger back muscles and greater midsection control to lean in and out of turns. George has no use of those areas but compensates with breathtaking track speed and the strength to accelerate up hills in the marathon.

George still has room for improvement. He has yet to learn the nuances of passing and breaking from the pack; in a furious rush among seven racers 70 feet from the finish line last month in London, he veered into a competitor, crashed into a wall, destroyed his tires and had to gather himself just to push one-handed across the finish line in seventh place. George has also been neglectful with his equipment — not exactly a neat freak on or off the track. He has occasionally left bolts of his chair untightened, hampering his performance.

"I'm not very mechanically inclined," George said with a laugh. "I haven't learned to enjoy working on my equipment yet. Wheelchair racers are entirely responsible for their own equipment — we don't have equipment managers to help maintain our chairs, and some people enjoy tinkering with their chairs more. I have to force myself to do that. What has cost me races is I'm stubborn, in that I believe I can push through whatever happens to my chair."

If George puts it all together, many in wheelchair racing say that he could be a breakthrough athlete, someone whose talent and personality could attract mainstream United States audiences and advertisers. (Many other nations' top wheelchair racers — like Britain's Weir and Canada's Chantal Petitclerc — are considered national sports heroes, worthy of product endorsements and other rewards.) This could prove crucial for George, because modest race purses barely help him make ends meet; in a few years, like many American wheelchair athletes before him, he could be forced to work a regular job, hurting his training.

"Is he the guy that can get the Coke ad? I think that he is," said Amanda McGrory, who finished second in the London Marathon among women and is another top United States medal contender for Beijing. "If anyone can do it, he will be the one that will be able to change wheelchair racing."

A new view will not mean a new vernacular. As George discussed his workout routine, like most wheelchair athletes, he used the same words to describe his sport — surge, rhythm, lactic buildup — as able-bodied runners would theirs. After all, he implied, his lungs and heart don't know that his legs don't work.

"Hey guys, you mind if I jog for 20 minutes and meet you back at the room?" George asked two visitors.

Off he went, staring straight head, pushing his racing chair increasingly fast over a footbridge that his feet never touched, quite contentedly.

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