Wheelchair Athletes' Challenges with the 2007 Boston Marathon

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The celebration and reenactment of the skirmishes between the Minute Men of Lexington and Concord and British troops is the quintessential observance of Patriots' Day in New England. This year, the ceremonies at the Lexington Green and North Bridge in Concord commemorating the start of the Revolutionary War were cancelled because of a dying nor'easter (a storm with gale-force winds from the northeast and precipitation ranging from a torrential downpour to a fine mist) that brought a soggy, blustery morning.

Patriots’ Day has also become synonymous with Marathon Monday—the third Monday of April on which the prestigious Boston Marathon is held— the world’s oldest annual road race. This year, despite clouds, a lingering rain, wind chill of 39°, and strong head winds out of the northeast gusting 20-36 mph, the 111th Boston Marathon started as scheduled. The weather conditions, some of the most trying in Boston Marathon history, forced runners to adjust tactics with Mother Nature, as well as with fellow athletes. The last time conditions were this bad was in 1970. First run in 1897, the Boston Marathon, the 26.2-mile point-to-point route from rural Hopkinton to Boston, has never been postponed or cancelled.

Because of the weather, Massachusetts Emergency Management Agency staff were concerned with hypothermia of the runners. To help mitigate the health-related issues for the 22,500 runners scheduled to participate, 1,200 medical personnel were available along the course to treat runners. In addition, 500 buses used to ferry runners from Boston to Hopkinton for the start of the race, were used as heated shelters along the entire course. Medical tents for emergencies were also spaced along the race course and at the finish line.
Wheelchair Athletes’ Challenges with the 2007 Boston Marathon

By Joseph H. Huber and Jamie L. MacKool

Boston Breaks with Tradition

Temperatures at the starting line have been in the 70's for three of the last four years. This year, the Boston Athletic Association (BAA) broke with tradition for the first time by moving the starting time for the push rim wheelchair division from 11:25 AM to 9:25 AM to give wheelchair athletes a cooler race temperature. The hope was fewer participants would be affected by the afternoon heat. There was no danger of that this year!

Adjustments to the 2007 Race

Because of the weather, the biggest safety concern for wheelchair athletes was the wet and steep pavement at the start of the race and on the back side of heartbreak hill about 21 miles into the race. Back in 1987, athletes were confronted with light rain at the start of the race. Jim Knaub, two-time winner of the Boston Marathon push rim wheelchair division, fell to the wet pavement at the bottom of the first hill in Hopkinton causing a chain reaction that forced nine other athletes out of the race because of damaged wheelchairs or physical injuries.

In 1988, conditions at the start were wet again, so David McGillivray, Race Director of the BAA, initiated a controlled start to
The historic course starts on Main Street in the rural New England town of Hopkinton and follows Route 135 through Ashland, Framingham, Natick, and Wellesley to where Route 16 joins Route 135. It continues on Route 16 through Newton Lower Falls to Commonwealth Avenue, turning right at the fire station onto Commonwealth which is Route 30. It continues on Commonwealth through the Newton Hills, bearing right at the reservoir onto Chestnut Hill Avenue to Cleveland Circle. The route then turns left onto Beacon Street continuing to Kenmore Square, and then follows Commonwealth Avenue inbound. The course turns right onto Hereford Street (NOTE: against normal traffic flow) then left onto Boylston Street, finishing near the John Hancock Tower in Copley Square.

Figure 1. Boston Marathon from its start in Hopkinton to the finish in Boston (provided by the Boston Athletic Association).

### 111th Boston Marathon Finish Times

**Men's Wheelchair**
1. Masazumi Soejima, Japan ........................ 1:29:16
2. Krige Schabort, South Africa .................. 1:36:27
3. Ernst Van Dyk, South Africa .................. 1:37:10
4. Choke Yasuoka, Japan .......................... 1:42:47
5. Tomasz Hamerlak, Poland ...................... 1:45:47
6. Adam Bleakney, Savoy, IL ...................... 1:45:51
7. Tyler G Byers, Sterling, VA ..................... 1:50:34
8. Patrick A Doak, Concord, MA ................... 1:55:58
9. Michel Filteau, Canada ........................... 1:57:59
10. Joshua George, Champaign, IL .................. 2:02:58
11. Renzo Martinez, Boca Raton, FL ............... 2:27:01
12. Mamoru Kusano, Japan .......................... 2:30:47
13. Paul A Bester, Maple Grove, MN ................ 2:32:52
14. Hiroshi Wachi, Japan ............................ 2:51:27
15. William K M.D. Tan, Ipswich, MA ............. 2:53:48
17. Cpt. Mackey | Tyndall, Panama City, FL ....... 4:22:33

**Women's Wheelchair**
1. Wakako Tsuchida, Japan .......................... 1:53:30
2. Amanda M McGrory, Champaign, IL ............. 1:58:01
3. Sandra F Graf, Switzerland ..................... 2:02:30
4. Diane Roy, Canada ............................... 2:04:13
5. Shirley Reilly, Tucson, AZ ....................... 2:14:49
6. Chantal Petitclerc, Canada ....................... 2:15:36
7. April B Coughlin, New York, NY ................. 3:05:00

### All-Time Top 10 Finish Times

**Men's Wheelchair**
3. 1:21:23 – Heinz Frei, Switzerland (1994)

**Women's Wheelchair**
2. 1:34:45 – Louise Sauvage, Australia (1994)
4. 1:35:42 – Connie Hansen, Denmark (1993)
8. 1:40:16 – Connie Hansen, Denmark (1992)
assist athletes with pavement conditions and the steep hill in Hopkinton. A pace car and four motorcycles were used in this year's race to control the speed of the athletes at the start until all push rim wheelchairs successfully reached the bottom of the first hill.

This year's weather conditions increased the probability of flat tires and misjudging speed when navigating corners. Athletes sought a competitive edge, but conditions forced them to pursue a more tactical race and to make cautious judgments to ensure safety on the hilly Boston Marathon course. One adjustment made by the majority of participants was the application of handball blister to their gloves—a tacky substance providing friction to the push rims of the wheelchairs even in wet conditions. A smaller number of athletes used sandpaper and contact cement to help propel their wheelchairs. Power generated from pushing during the race is critical, so lost power due to poor grip could mean the difference between winning and losing.

The strong northeast head winds generated by the lingering nor'easter provided athletes with another challenge. Since there is little weight in front of push rim wheelchairs, athletes had to adjust their body weight and pushing angle to steer effectively and keep their wheelchairs properly aligned and safe.

**Men's Wheelchair Division**

All eyes were on the push rim wheelchair division this year to see if 33 year-old Ernst Van Dyk of South Africa would win his seventh consecutive Boston Marathon. A victory would have tied him with Jean Driscoll of Champaign, Illinois, for the most consecutive Boston wins (1990-1996). But this was not to be Van Dyk's day, although he holds the current world record time of 1:18:27 (2004) at Boston.

In his first Boston appearance, Japan's Masazumi Soejima posted a time of 1:29:16, unseating Van Dyk (3rd place) by more than seven minutes and beating fellow South African Kri...
Schabert (2nd place) by more than six minutes. Prior to coming to Boston, Soejima set a course record at the Honolulu Marathon each of the last two years (1:30:32 in 2005 and 1:29:22 in 2006) and in February of this year he won the Tokyo Marathon in 1:32:21.

Van Dyk hit a pothole about a mile and a half before the finish line. The accident caused one tire to go flat and the other tire to come partially off the rim. After using his hands to work the one tire back on the rim, Van Dyk completed the race with a flat tire. Van Dyk’s trouble occurred after Soejima had already crossed the finish line. The day was also a disappointment for second place winner Krige Schabert who now has the distinction of six second place finishes in Boston, but he aims to return next year to win the elusive prize of first place.

**Women’s Wheelchair Division**

To complete a Japanese sweep of the push rim wheelchair division, Wakako Tsuchida won with the time of 1:53:30. This was Tsuchida’s third Boston. In 2002, she ran 3rd with a time of 1:50:09 and in 2003 she was 4th to cross the finish line in 2:02:43. Tsuchida led the entire course this year beating Amanda McGroery (1:58:01) of Champaign, Illinois, who won the New York City Marathon this past fall and Sandra Graf (2:02:30) of Switzerland who placed 3rd in three previous Boston Marathons. This year’s race will go down in history — no other Japanese racer, male or female, had ever won Boston.

**Epilogue**

The push rim wheelchair division of the Boston Marathon can trace its roots to Eugene Roberts, a Vietnam War veteran who had lost both legs and became the first person to complete Boston (1970), and Bob Hall who became the first officially recognized participant (1975) and now serves as the Race Director for the push rim division. To this day, Boston remains the oldest continuous marathon for wheelchair athletes and holds the world’s unchallenged standard for excellence.

**Selected References**


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