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Study: New Swimsuit Aided Record-Setters at 2009 Championships

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Yes, the 2009 swimming world championships were just as devious as you suspected.

A study by Northwestern University has found that the 43 world records set at the event in Rome were accomplished primarily as a result of the participants' swimsuits.

The study, published this month in the [Journal of Strength and Conditioning Research](#), found the slippery suits reduced drag, improved buoyancy and compressed muscles to create what many considered a [mockery of the sport](#).

The researchers deemed Speedo's full-body LZR Racer suit, a woven elastane-nylon and polyurethane

piece launched by the swimwear giant in February 2008, to be a primary culprit of the enhanced swim times.

“Our data strongly indicate that it was more than just hard work that allowed athletes to set the unprecedented 43 world records during the 2009 world championships,” said Lanty O’Connor of Northwestern University’s Feinberg School of Medicine. “The swimsuits played a significant role.” Men set world records in 15 of the 20 long-course (50 meters or longer) swimming events recognized by the Federation Internationale de Natation, the sport’s sanctioning body. Women set records in 17 events. O’Connor noted in the study that just two world records — in the men’s 1,500-meter freestyle and men’s 200-meter individual medley — have been set since FINA banned full-body, polyurethane technical swimsuits in 2010. (Each record was set at the 2011 World Championships in Shanghai.)

The study crunched publicly available swim race data from 1990 to 2010 and compared improvements in that sport with the results in track and field during the same period. The researchers chose track and field because they judged it similar to swimming.

They also considered various external factors like training science, gender differences, alterations in rules and regulations, anaerobic versus aerobic events, membership information and unique talent. O’Connor determined those factors played an insignificant role in the rash of world records set in Rome. It was the swimsuits that made the difference, he wrote.

“Now, nearly two years later, we have the data to show a strong correlation between the use of these suits and improved race times,” O’Connor said.

As revealing as the study is, folks have long suspected Speedo’s LZR suits compromised the integrity of swimming. Salon.com [documented how the suit worked](#) in a comprehensive article published in April, 2008, shortly after LZR’s release. The article cited the groin and abdomen as the areas of the body aided by the suit.

“The LZR is built, there, with an inflexible girdle-like structure meant to hold a swimmer’s body in the best position as he or she moves through the water,” Farhad Majoo wrote in the piece.

The Wall Street Journal noted in August, 2008 the level of [pride Speedo executives felt](#) because their product contributed to a tidal wave of records. Now the company hopes its latest product, the [Fastskin3 swimsuit, cap and goggles](#), lead to a new wave of records at the 2012 Olympic Games in London.

Photo: Mark J. Terrill/Associated Press

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