



Now, a gene test to tell you if your kid is sporty

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MUMBAI: Marol resident Aniket Das (9) swims countless laps for an hour every morning with his coach monitoring him with a timer and encouraging him to go faster.

After Aniket won his second gold medal at a swimming competition in school last year, his mother hired a coach to prepare him for city and state-level competitions though she wondered if he had what it takes to be a swimming champion. The result of a new genetic test done on him last month has cleared all her doubts.

"Aniket has the right genes for it, I am more confident now," she said. Aniket underwent the Sports Gene Test (SGT) that aims to determine whether one is suited for endurance sports such as distance running, power sports like sprinting or high jumps, or a combination of the

CONTROVERSIAL TESTING



Aniket underwent the test two months ago. SATTISH BATE/HT

- The SGT tests for ACTN3, a gene that researchers have found linked to athletic performance.
- It aims to determine if one is suited for endurance sports, power sports or a combination of the two.
- It's a popular, but controversial test that has been around in the US and Australia for several years.

two. Aniket belongs to the third category, say the test results.

Super Religare Laboratories (SRL), a private diagnostic chain, launched the test across India two months ago. It has been a popular, though controversial, test in the US and Australia for several years.

While scientists and sociologists raise questions about its accuracy and ethical ramifications, parents of more than 150 children in Mumbai and Delhi have already opted for it.

The Rs 1,900 test involves

taking a cheek swab of the child and testing it for ACTN3, a gene researchers have found linked to athletic performance.

"Once parents know the innate potential of the child, they can channelise it to maximise performance," said B.R. Das, executive director of SRL. "The test cannot predict whether the child is going to be a gold medalist." They are conducted on children over two years but the lab's getting inquiries from parents of babies just months old.

▶ **NOT A MAGIC BUTTON. P6**

'Sports gene test is not a magic button'

SCIENCE OF SPORT Experts say it can only indicate aptitude, not predict gold medals

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MUMBAI: Tennis ace Leander Paes, in his father Vece's words, is a short man playing a tall man's game.

Going by his five feet nine inch frame, he is not ideally suited to play the serve-and-volley style of tennis, where the player moves quickly towards the net after hitting the serve and then hits a shot without letting it bounce. Yet Paes has mastered this technique and earned international fame.

This is why the senior Paes, who is a sports medicine specialist, believes the Sports Gene Test, launched in India two months ago, should not be considered a "magic button" that can tell you whether your child will be an Olympian.

"No single factor, whether it is a physical attribute or genetic make-up, can determine one's performance in a sport. It is a combination of more than 50 different parameters and a lot of hard work that make a good athlete," he said. "It's not a bad idea to take the test but don't lose perspective."

Vece's views reflect those of other sports experts *Hindustan Times* spoke to about the Sports Gene Test, which has been introduced in India by Super Religare Laboratories.

The gene test gives broad categories but the biopsy can tell you exactly what kind of sport the child is suited for.

MANISHA MALHOTRA,
former tennis player

"The test will help parents provide appropriate training to the child. But they need to know that the gene can only tell you what the child is physiologically geared to do, not whether he/she will be a gold medalist," said Manisha Malhotra, former tennis player who grooms young athletes.

Malhotra has already decided that when she has a child, she will take him/her abroad for a muscle biopsy, an invasive procedure to test the type of muscle fibre. "The gene test gives broad categories but the biopsy can tell you exactly what kind of sport the child is suited for," she said.

But what if her child is not interested in the sport? "Of course, that is his/her choice. Parents must not force a child to play," she said.

Some experts, however, feel that it is better to test the child on the field and not in the laboratory. "If you put 10 children through a gene test and put 10 others on the field, I am sure we will have better success in spotting the talented ones in the latter way. Any good coach can figure out whether a child has the potential to be an athlete," said Viren Rasequinha, former Indian hockey captain.



■ Aniket Das, a Marol resident, won his second swimming gold medal last year.

SATTISH BATE / HT PHOTO



ACTN-3 AND SPORTS

- The ACTN3 is a gene, which instructs our bodies to produce a protein called alpha-actinin-3. This protein helps our muscles contract. Muscles contract differently during endurance and strength/ power exercises.
- ACTN-3 is present in all humans. We get two copies of the gene, one from the father and the

- other from the mother.
- The resultant combination determines which of the three variants of the gene one has inherited.
- This variant helps decide whether the body will have more fast twitch muscles or slow twitch muscles and indicates predilection to the type of sports.
- People with the XX variant of ACTN-3 have more slow twitch muscle fibres and are better suited for

- endurance sports like long-distance running, cycling and swimming.
- People with the RR variant have more fast twitch muscles and are better suited for power sports like high jumps and weight lifting.
- People with XR variant have a combination of muscle fibres and are suited for sports such as tennis and football where one needs both power and endurance.

THE TEST

- The sports gene test can tell you whether your child is best suited for an endurance sport or a power sport.
- The child's training and fitness regime can be modified accordingly to enhance performance
- It can also help spot talent.
- But the test cannot predict how good the child will be at a certain sport and whether he will be a stellar athlete.

AROUND THE WORLD

- The Sports Gene Test was first introduced in Australia in 2004. It was then marketed in Europe and Japan. It has been available in the United States since 2008. The test has found many takers but is also dogged by controversy.
- In India, it was launched by Super Religare Laboratories this March.