Athletes have bigger, more powerful hearts

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Athletes have bigger hearts both in terms of size and the ability to pump blood, according to an Italian study.

The research, involving top rowers, showed that a naturally-produced hormone called IGF-1 actually makes their hearts bigger, and more powerful.

Measuring the hormone levels in 38 people, half of whom were rowers, researchers from the Universities of Milan and Naples observed that the rowers had higher hormone levels and larger hearts.

The rowers also had a far lower resting heart rate compared with the others.

"Our results show both the left and right sides of the rowers' hearts are larger, and function at an enhanced capacity compared with those of controls. The causes of this are not completely clear - it could be due to the production of growth factors, such as IGF-1, during training," the BBC quoted Dr. Giovanni Vitale, who led the study, as saying.

A research article in the journal Clinical Endocrinology says that this hormone has been linked with the body's ability to trigger muscle strengthening, though the current study looks specifically at how it might affect the heart.

The World Anti-Doping Agency has asked Professor Peter Sonksen, a professor in endocrinology from St Thomas' Hospital in London, to investigate the possibility of a test for IGF-1 abuse in athletes.

He believes that it may be difficult to detect artificially-heightened levels of the hormone.

"People do have different levels of IGF-1 naturally, although elite athletes do tend to have higher levels. You can be born with higher levels, and then training can increase those further," he said.