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The Moving Finger writes; and, having writ,
 Moves on: nor all thy Piety nor Wit
 Shall lure it back to cancel half a Line,
 Nor all thy Tears wash out a Word of it. - Omar Khaiyyam

When It Comes To Sex, Size Matters

By [rickyjames](#), Section [News](#)

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As [reported by Reuters](#), size matters, at least when comes to spontaneous sex changes. Whether it's a tiny crustacean or a 1.5 metre long fish, creatures that spontaneously change their sex do it when they reach 72 percent of their maximum size, scientists said on Wednesday. [David Allsop and Stuart West](#), of the University of Edinburgh in Scotland, studied dozens of species of sex-changing creatures such as fish, worms, shrimp and molluscs, and all of them followed the same rule when altering their gender.



"Ninety-eight percent of the variation in the size at sex change across 121 species can be explained by this rule of 72 percent of maximum body size," Allsop, an evolutionary biologist said in an interview.

In related news, [scientists have discovered a gene that is crucial for the onset of puberty](#), a human developmental process that has long been swathed in mystery. Puberty begins when the brain's hypothalamus begins secreting a hormone -- gonadotropin-releasing hormone, or GnRH -- in an elaborate pattern of pulses. In response, the pituitary gland secretes additional hormones, which act on the ovaries and testes. They, in turn, induce the growth of breasts, body hair and other signs of sexual maturity. However, endocrinologists don't understand what triggers the GnRH pulses that set the whole cascade in motion. Using DNA from a Saudi family, scientists discovered that a gene in chromosome number 19 known as GPR54 is the master genetic switch for the puberty process.

Spontaneous sex change is relatively common in lower aquatic species with simple reproductive systems. Half of the creatures will change from male to female and the rest will switch the other way. Regardless of which way they change, the gender-altering creatures can still successfully reproduce afterwards.

"They are mother and father in the same lifetime. That is the staggering thing about it," he added.

Allsop, who reported the findings in the science journal Nature, said the creatures reach 72 percent of their maximum size and then something

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triggers the sex change, but they are not sure what it is.

"Our results suggest that the underlying factors favouring sex change are remarkably similar in all animals. More generally, it is amazing that simple theoretical ideas can potentially explain a universal characteristic of growth and reproduction across such different groups" West added in a statement.

Regarding the [puberty gene discovery](#), "It's a wonderful surprise," says Stephanie Seminara of Massachusetts General Hospital in Boston, who helped to determine the gene's function. Drugs that alter the gene's activity could stifle or boost fertility, she says. This could help those who experience puberty abnormally early or late. GPR54 blockers may also help to treat prostate cancer, suggests hormone specialist Larry Jameson of Northwestern University in Chicago. Such drugs could dampen the effects of testosterone, which can swell tumour size.

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