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A Woman's Promiscuity Determines the Sperm's Speed and Power

The human species amongst primates

Humans, like animals, experience a fierce competition for sex. And this competition does not stop with mating, as a woman can be promiscuous. That's how sperm competition emerges. A new research has tried to see how sperm speed connects to the species' sexual behavior, while placing us amongst other primates. The team led by Jaclyn Nascimento at the University of California in San Diego, US, investigated sperm samples from humans, gorillas, chimpanzees and rhesus macaques. Chimp and macaque sperm samples were obtained by employing artificial vaginas, while the gorillas were trained to donate sperm (with the help of an investigator) in exchange for candy. The team focused on specific sperm within the diluted samples, recording the sperm activity on film. A specially developed sophisticated computer software measured the speed of a given sperm by tracking its head. The sperm samples from two males counted for a travel speed of about 0.2 km/hour, the same value found by previous researches.The sperm from chimpanzees and macaques had a speed of 0.7 km/h. Chimps and macaques live in groups where males form coalitions, that's why any male can mate with any female, and vice versa. A chimp female can have multiple sex partners in one hour, thus the sperm competition is much stronger in this case. "The first ones to make it to the egg succeed," said Nascimento. But in the case of the gorillas, the sperm speed was of just 0.1 km/h. Gorillas live in a groups formed by one male, several females, and their offspring. Females have just one sex partner at a given time. "You are the best by default," said Nascimento.Moreover, the team assessed the force developed by the sperm. The laser technology called "optical tweezers" held the sperm in place by employing light. Sperm had to develop enough force to break this resistance field for going forward. The chimp and macaque sperm also appeared to be more powerful, at about 50 piconewtons, while human sperm developed just about 5 piconewtons, and gorillas some lousy 2 piconewtons. The speed and power developed by the sperm is due to inner cell structures that power the movement of their tails. These structures' activity can be influenced in humans by some chemicals, like caffeine and anti-impotence drugs.