Sexy swimmers: Sperm cell tails use elastic springs to control movement

Human sperm cells get an extra oomph forward as they swim, thanks to interconnected elastic springs in their tails that communicate with other regions of the tail, a new study finds.

These elastic springs transmit mechanical information to the distant parts of the tail, helping it bend as it wriggles its way toward an egg, the researchers said.

…

[S]tudies dating to 50 years ago revealed that the [the sperm's] flagellum is constructed out of a complex system of filaments that are connected by elastic springs, giving the tail a cylinder-like structure. Researchers used to think that this system provided the sperm tail with a scaffold that helped it swim toward the egg. The new study adds to that idea, showing that this system of elastic springs not only maintains the structure of the tail but also transmits information to distant regions of the tail, allowing it to bend and move in its own way.

…

The tails of the dead sperm helped the researchers understand how the different parts of the tail bend as the sperm moves. Intriguingly, they saw that movement beginning near the sperm's head led to an opposite-direction bend at the tip of the tail — an occurrence known as a counterbend phenomenon.

[Read the full study here (behind paywall)]

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: The Secret to Sperm's Sexy Swimming