A New HIV and Pregnancy Prevention Tool: Electrically Spun Fibers

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Raising the possibility of a new mechanism for preventing both pregnancy and HIV transmission, researchers have found that electrically spun cloth can create both a chemical and physical barrier against sperm and the virus, the University of Washington reports. Researchers at the University of Washington, aided by a National Institutes of Health grant, published the results of a early study of the cloth in the journal PloS One.

Using a technique known as electrospinning, researchers created a stretchy fabric infused with multiple HIV antiretrovirals. They found that the meshes prevented HIV infection when tested in vitro (meaning in the lab—not in humans or animals) and also physically blocked sperm. A fabric can be made to dissolve after varying lengths of time, possibly making it practical for short- or long-term protection when inserted into the vagina, either its own or as a coating on a vaginal ring or other devices.

The research team has received a nearly $1 million grant from the Bill & Melinda Gates Foundation to support further research of the technology, in hopes that they will one day produce a new, female-empowered arsenal against pregnancy and disease. Over the course of a year they will study various combinations of two HIV medications plus a contraceptive agent, followed by six months when they will hone their sights on the most promising results of their research.

To read the university report, click here.

To read the study, click here.

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