



Prevention: PrEP Implant

A biodegradable implant for pre-exposure prophylaxis could “potentially revolutionize” HIV prevention

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A biodegradable implant for pre-exposure prophylaxis (PrEP) could offer protection for several months and “potentially revolutionize” HIV prevention. One benefit of implants is that they are removable. When using Apretude for PrEP, residual cabotegravir can remain in the body for a year or more after the last injection, known as a “long tail.” If a person acquires HIV after stopping Apretude, the virus can develop resistance to cabotegravir. Researchers evaluated an ultra-long-acting subcutaneous cabotegravir/barium sulfate (CAB/BaSO₄) implant capable of maintaining therapeutic drug concentrations for up to 390 days. Barium sulfate is a contrast agent that can be visualized in the body using X-rays. The implant was well-tolerated and caused minimal inflammation in mice. After removing the implant, cabotegravir plasma levels fell below the inhibitory concentration within 24 hours and below the limit of quantification within 14 days. Whole-body X-ray imaging showed that the implants remained visible for up to 268 days with no noticeable migration.

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