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‘Horrible Idea’: First Vaccine for Birth Control Now in Clinical Trials

Rather than disrupt the menstrual cycle, as hormonal forms of birth control do, the vaccine uses the immune system to prevent pregnancy by blocking fertilization.

By

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Humanity's first contraceptive vaccine is already in clinical trials, according to an article published this week in [The Atlantic](#).

Reporter [Katherine J. Wu, Ph.D.](#), described the vaccine, as envisioned by its developer Professor [Gursaran Pran Talwar](#), stating that it would be:

“A new form of contraception that could block pregnancy without the usual trade-offs — an intervention that’s long-acting but reversible; cheap, discreet, and easy to administer; less invasive than an intrauterine device and more convenient than a daily pill.

“It would skip messy, sometimes dangerous side effects, such as weight gain, mood swings, and rare but risky blood clots and strokes. It would embody the sort of ‘set it and forget it’ model that’s become a gold standard for health.”

Rather than disrupting the menstrual cycle, as hormonal forms of birth control do, the vaccine uses the immune system to prevent pregnancy by blocking fertilization.

Talwar first developed the vaccine and patented a version of it in the early 1990s. That version, meant to be effective for two years before a booster was needed, was reported to be [“nearly 100% effective.”](#) Talwar, former director of India’s National Institute of Immunology, told Wu he developed the vaccine because he knew women in India who were struggling to feed large families, but were unhappy with existing forms of contraception.

He said he wanted to make something, “free of all problems,” so he created a vaccine that would neutralize the [human chorionic gonadotropin](#) (hCG) hormone, known as “the pregnancy hormone” because it is necessary for fertilized eggs to implant.

But [Brian Hooker, Ph.D., P.E.](#), chief scientific officer for [Children’s Health Defense](#), said such a vaccine doesn’t just have problems, “It is an absolutely horrible idea.”

Hooker told [The Defender](#):

“So much can go wrong by ‘immunizing’ a woman with hCG identical to the hormone she produces, or men with sperm proteins to attack their own sperm at the production site.

“The big question that comes to mind is ‘reversibility.’ It is very difficult to turn off an immune response complete with [memory B-cells](#) after it has been turned on. My fear is that many would be left permanently sterile from this type of vaccine.

“Also, the problems posed by this technology related to autoimmunity are myriad.

“Essentially, by coaxing the body to attack human proteins, you also put human tissues, including primarily vital reproductive organs, in the line of fire for many harsh inflammatory processes associated with an immune response.

“This is one bad idea!”

Mary Lou Singleton, midwife and family nurse practitioner, also raised safety concerns. She told The Defender:

“This would be the first vaccine designed to provoke an immune response against a normal, healthy bodily process.

“Like all living organisms that reproduce sexually, the human body is organized around our reproductive potential.

“We have no idea what the long-term consequences of programming the immune system to attack the part of our body that sustains early pregnancy may be, but we do know that the history of medicine is full of unintended consequences.”

The Atlantic article didn’t focus on possible health risks. Instead, it touted Talwar et al.’s [1994 vaccine clinical trial](#), where only 1 of 119 women in the study became pregnant.

The limitations, Wu said, are in the fact that although they didn’t get pregnant, about 20% of the women did not produce the threshold amount of antibodies for the trial to be successful. This would be considered sufficiently effective for a regular vaccine, Wu wrote, but for contraception, expectations are higher.

Another limitation she noted is that a three-shot series could be “cumbersome.”

But, she wrote, “There is some reason to think these issues aren’t insurmountable,” because immunocontraceptives have been used for decades by [wildlife scientists](#) to prevent pregnancies “as a more humane alternative to culling.”

Immunocontraception has primarily been used on captive animals, but it also has been used for population control of some wild species such as white-tailed deer, wild horses, bison and elephants, according to the [Humane Society of the United States](#).

[Dr. Julie Levy](#), a feline infectious disease expert at the University of Florida who has worked on immunocontraceptives in animals described the challenge of creating an effective contraceptive vaccine as “trying to immunize an animal against itself.”

Wu also mentioned that the hCG vaccine has “encountered some issues with tolerability,” in that some women develop “painless but prominent nodules,” which she said indicates the adjuvants in the vaccine are “riling up the immune system a tad too much.”

That means scientists will have to “tinker with dosing or ingredients,” before the vaccine is ready, she wrote.

But, she argued this vaccine is important because it could fill clear gaps in the contraceptive market.

“Nearly half of the world’s pregnancies are unplanned,” and access to existing contraception is “inconsistent, inequitable, and still stymied by stigma and misinformation,” she said.

Drawing on an interview with [Debanjana Choudhuri](#), director of Programs and Partnerships at India’s Foundation for Reproductive Health Services, Wu added:

“A temporary contraception, packaged into a super-safe vaccine, could offer convenience and privacy, with potential appeal for young urbanites, who have already been enthusiastic about injectable contraceptives and might not mind getting boosts.

“Most important, adding a vaccine to the repertoire gives people ‘another choice.’”

‘Pregnancy is not a disease’

The real challenge to launching a birth control vaccine, Wu wrote, is that some might stigmatize it because of the history of contraception imposed on women, particularly the poor, mentally ill and people of color, without their consent or to their detriment.

[Sanghamitra Singh, Ph.D.](#), the Policy and Programmes lead at the Population Foundation of India, told Wu that “pregnancy is not a disease.”

Wu conceded that vaccination against pregnancy might “unintentionally” imply that pregnancy is a problem to be eradicated and that could stigmatize the shot.

Singleton said she also had concerns about potential abuse.

She added:

“People in power all over the world continue to curtail the reproductive rights of women through forced and coerced long-term contraception and sterilization.

“As anti-natalism and concerns about overpopulation rise among the ruling classes, will this technology be added to state-mandated vaccination schedules for teenagers, immigrant women, poor women or other groups labeled ‘high-risk’ for undesired pregnancy?”

Wu also conceded that the administration of the vaccine could “raise the specter of the eradication of fertility in society’s most vulnerable subjects,” because, according to [Lisa Campo-Engelstein, Ph.D.](#), a reproductive bioethicist at the University of Texas Medical Branch, the ease of administering it might mean it would be more likely to be given without fully [informed consent](#).

This might be a problem, Wu pointed out, in today’s climate where many people are already “disinclined toward shots,” especially amid “false accusations that other immunizations compromise fertility.”

But recent [Pfizer data](#) obtained through Freedom of Information Act requests showed a link between the [COVID-19](#) vaccine and miscarriage and birth defects.

Pfizer’s animal studies for the vaccine showed major red flags regarding both pregnancy loss and fetal abnormalities.

The documents also revealed that the drugmaker elected not to follow up the vast majority of pregnancies in the original [human trials](#), despite high miscarriage rates in the minority they did follow. Singleton said the question of vaccine safety was already difficult to discuss, and combining that with a discussion of contraception could raise even more challenges.

She said:

“As has become evident over the past few years, mainstream society allows no dialogue or critique on the subject of vaccine safety. Already it is difficult for women’s health activists to broach the topic of the safety and long-term effects of hormonal contraception.

“Combining the medical sacred cows of birth control and contraception seems like a recipe for a medical intervention no one will be allowed to question.”

Wu’s article attributes the fact that Talwar’s vaccine has made little progress since the early ’90s to “bad timing.” He only recently got approval to run trials on his new “vaccine recipe.” But, she reported the research is moving forward and may also be directed toward immunotherapy for certain cancers.