



Multipurpose Prevention Technologies (MPTs)

An Introductory Factsheet

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This fact sheet provides basic information on multipurpose-prevention options. For more basic fact sheets in this series on emerging HIV prevention tools visit www.avac.org/intro.

The Need

Women need a variety of prevention strategies for different needs. They need protection against HIV and other STIs, as well as the prevention of unwanted pregnancies. Today only male and female condoms do both. But these methods require partner negotiation and cooperation which can be a challenge. Many women may not know the full range of options or be able to find them from trained providers. They may not be able to access or pay for them. Women have long asked for methods that meet HIV prevention and family planning needs and are easy to use —and work is underway to develop these “multipurpose prevention technologies”.

The Products

Multipurpose prevention technologies (MPTs)—most of which are still experimental—are designed to address two or more sexual and reproductive health concerns simultaneously; for example, combining protection against unintended pregnancy and at least one sexually transmitted infections. Both male and female condoms prevent against HIV, other STIs and pregnancy and so are important examples of MPTs that already exist. Additional choices that are not reliant on partner cooperation are needed for women to have more control of their sexual and reproductive health.

Effective, affordable, and widely available MPTs would save lives and money, improving the health of women and their families across the globe.

The good news is that here are nearly a dozen MPTs in clinical trials, with many other innovative technologies in earlier stages of development. MPTs in development include:

- Longer-acting vaginal rings
- Fast-dissolving films and tablets
- Innovative and effective gels
- Injectables that combine contraception and protection against infection
- Nanofiber delivery systems

The MPT product development box shows a variety of possible technologies. *Indication* lists possible health issues addressed by MPT. *Delivery Mode*: lists technology by type, e.g. vaginal gel, pill or injection. *Mechanism by action*: lists the range of biological action MPT can be designed to perform, e.g. physical barrier, hormonal contraceptive [HC]. *Dosage & Administration* lists methods to administer dosage, e.g. daily pill, topical application, sustained through the blood, taken around the time of sex (on-demand).

Resources and Links

AVAC www.avac.org

Initiative for Multipurpose Prevention Technologies
www.theIMPT.org

CONRAD www.conrad.org

International Partnership for Microbicides
www.ipm.org

Population Council
www.popcouncil.org

MPT Product Development: Many possibilities for MPT development

Indications	Delivery Modes	Mechanisms of Action	Dosage & Administration
BV*	Diaphragm*	Anti-microbial*	Oral daily*
Candida	Film*	Anti-fungal	Oral on-demand Gel*
Chlamydia*		Anti-viral*	Systemic sustained*
Gonorrhea*	Implant	Barrier*	Topical daily*
HIV*	Injection*	HC *	Topical on-demand*
HPV*	Intrauterine Device	Non-HC*	Topical sustained
HSV*	Oral pill*	Probiotic	
Pregnancy*	Ring (Non-IVR)		
Syphilis	Ring (IVR)*	*Currently being tested in human clinical trials.	
Trichomoniasis	Tablet*		

The Pipeline

The table below highlights a few products for both sustained-release and on-demand (peri-coital) products. Women will have different needs and preferences throughout their lives. A variety of products is key to meeting the needs of different women.

MPT Products in the Pipeline: Selected highlights	
Products not requiring daily-use	Products used around the time of sex
<p>90-day IVR (LNG and tenofovir)</p> <p>An intravaginal ring (IVR) that stays in for 90 days and releases two hormones, levonorgestrel (LNG) for contraception and tenofovir for HIV and HSV-2 prevention. (Developer: CONRAD)</p>	<p>mapp66 (mAB)Film</p> <p>A combination of 3 monoclonal antibodies (mABs) delivered through a biodegradable film for protection against HIV and HSV-2. (Developer: Mapp Biopharmaceutical, Inc.)</p>
<p>90-day IVR (dapivirine and LNG)</p> <p>An intravaginal ring (IVR) that stays in for 90 days and releases a combination of dapivirine to prevent HIV and levonorgestrel-releasing hormone (LNG) to prevent pregnancy. (Developer: IPM)</p>	<p>Vaginal insert (tenofovir and TFV/FTC)</p> <p>Fast-dissolve vaginal tables with tenofovir alone and tenofovir combined with emtricitabine (TDF/FTC) for HIV and HSV-2 protection. (Developer: CONRAD)</p>

Acronyms

HC – Hormonal contraception

IVR – Intravaginal ring

LNG – Levonorgestrel-releasing hormone (hormonal contraceptive)

mAB – Monoclonal antibody

TDF – Tenofovir

TDF / FTC – Tenofovir / emtricitabine

* There are mixed data regarding the impact of Depo-Provera (DMPA) on women's risk of acquiring HIV. A meta-analysis commissioned by the WHO recently found increasing concern, and research is ongoing. See www.avac.org/hc-hiv for more information on the state of the science, advocacy and research related to this issue.

About AVAC | AVAC is a non-profit organization that uses education, policy analysis, advocacy and a network of global collaborations to accelerate the ethical development and global delivery of new HIV prevention options as part of a comprehensive response to the pandemic. This fact sheet is part of the Women's HIV Prevention series, created to address HIV prevention strategies and the advocacy needed to bring them to reality.