



How to Have a Healthy Baby

For moms-to-be, seven best-chance options to keep your infant HIV negative

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It's the best of times for HIVers wanting to have a baby. Antiretroviral treatment coupled with good medical care has drastically reduced mother-to-child HIV transmission in the industrialized world, and some U.S. perinatal clinics using combination therapies can now even boast zero transmission rates.

Just six years ago, many HIV positive pregnant women were routinely told their only option was abortion. Now mother wannabes can arm themselves with enough information to tailor a treatment plan to suit their specific health needs and approaches. Sadly, for women in poor countries access to all of these options remains limited. And we still know little about the long-term effects of these interventions on the child or, for that matter, on the mother, who is too often ignored in AIDS research.

One thing, though, we do know: Viral load level is the strongest predictor of perinatal transmission. A recent study found that none of the women with viral loads under 1,000—as opposed to 20 percent of those with higher counts—transmitted HIV. Without drugs, an average of one in five positive women worldwide has an infected baby, but actual transmission rates range from 15 to 40 percent—with the higher numbers for women with poor nutrition, inadequate health care or more advanced disease. We also know that transmission generally occurs during labor and delivery, much less frequently earlier in pregnancy, and quite often during breast-feeding (see "[Spare the Breast](#)").

So whether you're already pregnant, trying to conceive or still deciding, take heart: The following seven options, culled from interviews with practitioners, researchers and PWAs, can help to make your nine-month journey as safe as possible for you and your passenger. Remember: You have the right to be treated by a practitioner who respects your wishes. If possible, schedule an appointment before conception to discuss your options. And start prenatal care (especially a healthy diet and vitamins) as early as possible to help ensure a healthier baby.

Long-Term AZT ("076 REGIMEN")

Mother: AZT pills, 300 milligrams (mg) twice daily through pregnancy, starting after first trimester; then AZT infusion during labor (2 mg per kilogram [kg] of body weight first hour, 1 mg

per kg per hour till delivery).

Baby: AZT syrup, 2 mg per kg every six hours, for first six weeks.

Cost: About \$800

Benefits: The federal 076 trial that gave this regimen its name found that AZT reduced transmission rates to 8 percent, compared to 25 percent of those on no treatment. AZT may also indirectly reduce incidence of HIV-induced low birth weight and premature birth.

Risks: Long-term dangers unknown because the oldest kids exposed to AZT are only 8 years old, but little health damage seen so far. Two reports of deaths (from a neurological disorder) of uninfected babies whose mothers took AZT or AZT/3TC. AZT gets incorporated into mother's and child's DNA, which could theoretically lead to cancer—and has in mice studies. Monotherapy can create viral resistance in the mom, potentially disabling nucleoside drugs taken later. See "Combination Therapy" for risks of taking or stopping meds in first trimester.

Notes: The AZT regimen by itself was formerly the standard of care (and remains so for women with high CD4s and low viral loads who would not otherwise be treated), but now is recommended only as part of combo therapy.

Short-Term AZT

Mother Only: AZT pills, 300 mg twice daily, for four weeks before labor, followed by oral AZT during labor and delivery, 300 mg every three hours.

Cost: \$270 (\$50 in some poor nations)

Benefits: A Thai study found that 9 percent of positive mothers on this regimen passed HIV to their babies, compared to 18 percent of those on no treatment.

Risks: Similar to long-term AZT, though possibly less due to lower exposure.

Notes: Not recommended for women with other choices. An even shorter regimen—intravenous AZT for the mother during labor, followed by 2 mg of AZT syrup per kg for the baby every six hours, beginning no later than 24 hours after delivery, for six weeks—is recommended only for emergencies when the mother had no prenatal care or had not received HIV testing or therapy until labor.

Combination Therapy

Mother only: The same antiretroviral combo she is on, or the one she chooses to start, with possible break during first trimester (see Notes). Federal guidelines recommend including or adding the 076 dosages of AZT (for mother and baby) unless the woman is intolerant or has AZT-resistant virus.

Cost: \$6,000 to \$10,000

Benefits: Besides improvements to the mother's health, several observational studies and many doctors find combination therapy the best way to prevent transmission. Combos also reduce the risk of AZT monotherapy resistance.

Risks: No trial data on transmission reduction. Usual combo-therapy side effects, one of which—hyperglycemia (excess blood sugar)—may also be induced by pregnancy itself. Drug removal for 14 weeks of first trimester may give woman resistant HIV. Little data on safety for babies. A Swiss study of 37 pregnant women taking two- or three-drug combos found a high rate

of prematurity and other infant health problems, but U.S. studies found no ill effects.

Notes: The feds recommend that women already on combo therapy weigh the benefit of going off all drugs for the first trimester (reducing the chance of birth defects) against the risk (increasing the mother's viral load). The nonnucleoside efavirenz (Sustiva) is not recommended: Offspring of female monkeys suffered serious birth defects.

Nevirapine

Mother: One 200 mg pill of the non-nucleoside nevirapine (Viramune) at the onset of labor.

Baby: One dose (2 mg per kg) of liquid nevirapine no later than 48 to 72 hours after birth.

Cost: About \$4

Benefits: A joint U.S.-Ugandan study found that this regimen cuts HIV transmission to 13 percent, compared to the 25 percent seen with short-course AZT. Avoids unknown long-term adverse effects. Unlike AZT, does not alter DNA of mother or child. Simple to administer.

Risks: Not relevant for women who have suppressed their viral load with other therapies. In cases where transmission occurs before labor, no benefit. A federal clinical trial is studying the benefits of adding one dose of nevirapine to the mother's and newborn's combo therapy.

Notes: Only recommended for consideration by women who have not received prenatal care or HIV testing or treatment before delivery, or for women in poor countries where funds are limited.

Multivitamin Tablets

Mother Only: Multivitamin/mineral that includes vitamins A (5,000 international units [IU], plus 30 mg beta-carotene), B-1 (20 mg), B-2 (20 mg), B-6 (25 mg), B-12 (50 mcg), folic acid (800 mcg), C (500 mg) and E (30 mg), plus prenatal iron (120 mg) and folate (5 mg), taken daily throughout pregnancy. (These higher-than-standard-prenatal dosages are recommended to counter HIV-induced nutrient malabsorption).

Costs: \$150 to \$300

Benefits: A Harvard University study in Tanzania found that this regimen reduces fetal deaths, low birth weights and premature births and generally increases mothers' CD4 counts, but data on HIV transmission are still being tabulated. An observational study in Malawi found that women with adequate vitamin A had a 7 percent transmission rate, versus 32 percent for women with an A deficiency (none received medications). A Kenyan study found that vitamin A deficiency correlated with increased rates of HIV in women's breast milk. But a U.S. study showed no significant transmission differences related to A deficiency, although it did find A-deficient women at greater risk of bearing a baby with low birth weight.

Risks: No data show reduced transmission with multivitamins. More than 10,000 IU of vitamin A daily could cause birth defects.

Notes: Before taking doses higher than those contained in prenatal vitamins, consult your health practitioner. Zimbabwean study underway of single doses of vitamin A for mothers and babies.

Vaginal Cleansing

Application of disinfectant to vagina during labor, with either suppositories or syringes. Cleansers

tested have included diluted concentrations of chlorhexidine, benzalkonium chloride and betadine.

Cost: Pennies

Benefits: African trials of various cleansers—in which the women also breast-fed, thus risking transmission—found benefit only for mothers whose membranes ruptured more than four hours before delivery. But an Indian study combined vaginal washing (with betadine 1 percent solution), avoidance of squeezing the umbilical cord (a common procedure to force blood into the baby and thus minimize anemia) and restriction of breast-feeding, which reduced HIV transmission to 6 percent, versus 38 percent of those untreated.

Risks: Possible irritation to mother or baby. Little data on benefits. Not recommended as sole treatment for women with access to other options.

Cesarean Section

Surgical delivery of baby before labor to prevent infant's exposure to ruptured membranes, blood and secretions.

Cost: \$3,000 to \$5,000

Benefits: A large survey found that among unmedicated pregnant women, 10 percent of those who had C-sections transmitted HIV, compared to 20 percent of those who had vaginal births. Those who were taking AZT and had a C-section had a 2 percent transmission rate, versus 7 percent for vaginal births.

Risks: Excessive bleeding, blood clots, longer recovery period and infection. C-section does not prevent pre-birth ("in utero") transmission. No evidence that C-section benefits women on combo therapy or with low viral loads.