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## **Poisoning Our Babies -- The Lethal Dangers of AZT**

**By Neville Hodgkinson**

Can the antiviral drug AZT, given to HIV-positive mothers in pregnancy and to their newborn babies, protect against mother-to-baby transmission of AIDS? The claim that it does so is entirely speculative. Yet the harm done by the drug is extensively documented. [AZT stands for azidothymidine. It is also called zidovudine by the manufacturer and marketed under the name Retrovir.]

AZT treatment strategy is based on a number of beliefs. One is that certain biological signals, such as elevated "viral load" and "HIV" antibodies, signify HIV infection. Another is that HIV infection is the cause of AIDS. If either or both of those suppositions are untrue, as some scientists argue [see adjoining article "Molecular Miscarriage: Is the HIV Theory a Tragic Mistake?"], then all mothers and babies treated in this way are being uselessly exposed to an unquestionably dangerous chemical.

AZT's proven toxicities include severe muscle pain, weakness, and atrophy; heart muscle changes and malfunctions; bone marrow suppression, with consequent anemia and loss of all types of blood cells; liver failure; and broad-ranging and sometimes irreversible loss and poisoning of mitochondria, the energy "factories" within our cells. The drug also leads to permanent DNA damage, and studies in mice and monkeys have raised concerns that babies exposed to AZT in the womb will face an increased risk of cancer when they grow up. (1)

A minority of infants born to HIV-positive mothers show elevated levels of HIV antibodies. Among that minority, many lose their HIV-positive status within about 18 months and are judged not to have been infected, but simply to have inherited the elevated levels of antibodies from their mothers. A European collaborative study by researchers from the Department of Paediatric Epidemiology at London's Institute of Child Health found a natural transmission rate of only 12.9 percent in 372 children, with the researchers declaring, "Estimates in many earlier studies may have been biased upwards." (2)

So even by conventional reckoning, nearly nine out of ten babies born to HIV-positive mothers cannot receive any benefit from being exposed to AZT.

Screening mothers for HIV and treating both mother and baby with AZT and other antivirals does reduce the proportion of babies who test positive -- to as low as 1 or 2 percent in some studies where more than one drug has been used. But this may simply be a result of general suppression of the immune system by the drugs, with resulting reduction in the signals thought to represent HIV positivity. Since there are huge question marks over the validity of the tests, over bias in the interpretation of results, and over what a positive test result means, the crucial question is: What happens to the babies afterwards? Do the antiviral drugs really help children live longer or healthier lives?

The answer appears to be that they don't. US scientist David Rasnick, a member of the

South African Government's Advisory Panel on AIDS, told the inquiry in July 2000 that he had "scoured the literature" for evidence of such benefit but was unable to find any. On the contrary, the evidence points in the opposite direction. In June 2000, researchers reported that "rapid disease progression" (defined as occurrence of an AIDS-defining disease or AIDS-related death before 18 months of age) was three times more likely to occur in babies born to mothers treated with AZT than when the mother was untreated. This was despite a halving in the purported infection rate in the AZT-exposed babies.(3)

Similarly, an Italian study involving more than 200 HIV-positive children found that at three years old, those born to mothers treated with AZT during pregnancy were significantly more likely to have developed severe disease than children whose mothers were not treated. They also had a higher death rate.(4)

In France, researchers found mitochondrial damage in eight children exposed to AZT in the womb and after birth. Two of the eight died and the others had severe biological and neurological abnormalities.(5) Four of the eight had been exposed to AZT and another antiviral drug, lamivudine, and four to AZT alone; none was judged "HIV infected." The findings led the UK's Committee on Safety of Medicines to issue a warning about the risks to babies, in advance of publication of the French study.(6)

The study also prompted formation of the US Perinatal Safety Review Working Group in February 1999. The group reviewed 353 deaths in more than 20,000 children with and without antiviral drug exposure, and in September the same year reported that it had identified no deaths similar to those reported from France.(7) That would be reassuring, were it not for clear evidence from animal and other human studies that AZT and similar drugs are toxic to mitochondria.(8) Moreover, the French researchers stated that the symptoms in the children in their study were only identified through a specific search for mitochondrial damage, "and may therefore have not been identified as toxic effects of treatments. Prospective studies designed to investigate this effect are essential."

Long-term consequences of exposing babies to AZT are unknown. In a 1999 study, American researchers found that the chemical becomes incorporated into the DNA of most patients, "including infants exposed to the drug in utero."(9) They commented that the biological significance of the immediate damage to DNA, "and potential subsequent events, such as mutagenicity, should be further investigated in large cohorts of HIV-positive individuals." The same authors reported that AZT is "a moderate to strong transplacental carcinogen in mice," leading to tumors in the lungs, liver, and female reproductive organs; that it is readily incorporated into the human placenta; and that "infants exposed to AZT even for short periods of time during gestation may sustain genotoxic damage."(10)

Increasing the number of drugs used in pregnancy increases the risk to the baby. In New York, an HIV-negative baby whose positive mother received AZT and two other antivirals was born with congestive heart failure secondary to profound, life-threatening anemia. Doctors said the cause was suppression of the baby's bone marrow "by one or more of the antiretroviral agents administered to the mother."(11) AZT damage to bone marrow can be long lasting as well. (12)

In December of 1998, Swiss researchers reported, "Following combination antiretroviral therapy administered during pregnancy, most HIV-positive mothers and about half of their children developed one or more adverse events." Of 30 babies, "the most common

adverse event was prematurity (ten infants), followed by anemia (eight)." Two babies had skin tumors, two developed brain hemorrhage, one had a bile duct abnormality, and one had transient hepatitis. (13)

Some studies have shown high rates of abnormalities in babies exposed to AZT alone. Out of 80 babies born alive to AZT-treated mothers at a hospital in India, 10 percent had birth defects including holes in the chest, abnormal indentations at the base of the spine, misplaced ears, misshapen faces, heart defects, extra digits, and albinism. (14) These were probably poor, malnourished babies already at risk of abnormal development. But a New York study showed higher risk of birth abnormalities in AZT-exposed babies than in those born to HIV-positive mothers who were not prescribed AZT. (15)

To cap all of this, a 30,000-word review of the molecular pharmacology of AZT, published in June 1999, presents evidence that AZT's claimed mode of antiviral action cannot be as the manufacturers have proposed, rendering it incapable of exerting anti-HIV effects. On the other hand, the authors conclude, "A number of biochemical mechanisms...predicate the likelihood of widespread, serious toxicity for the use of this drug."(16) According to South African lawyer Anthony Brink, this "withering indictment" of AZT "ought to sound its death knell in clinical practice. No doctor whose adult or infant patient sickens or dies on AZT will be safe from damages actions founded on medical negligence after this."(17)

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#### **NOTES**

1. A. Brink, "Debating AZT: Mbeki and the AIDS Drug Controversy" (Pietermaritzburg, South Africa: Open Books, 2000), 42-45. This is an extensive, up-to-date critical review of AZT by a South African advocate ([abrink@iafrica.com](mailto:abrink@iafrica.com)).

2. "Children Born to Women with HIV-1 Infection: Natural History and Risk of Transmission," European Collaborative Study, *The Lancet* 337 (1991): 253-260.

3. R. S. De Souza et al., "Effect of Prenatal Zidovudine on Disease Progression in Perinatally HIV-1 Infected Infants," *Journal of Acquired Immune Deficiency Syndrome and Human Retrovirology* 24, no. 2 (June 1, 2000): 154-161.

4. Italian Register for HIV Infection in Children, "Rapid Disease Progression in HIV-1 Perinatally Infected Children Born to Mothers Receiving Zidovudine [AZT] Monotherapy During Pregnancy," *AIDS* 13 (May 28, 1999): 927-933.

5. S. Blanche et al., "Persistent Mitochondrial Dysfunction and Perinatal Exposure to Antiretroviral Nucleoside Analogues," *The Lancet* 354 (September 25, 1999): 1084-1089.

6. "Perinatal AZT: New Warning on Potential Risk to Infants," [www.aidsmap.com](http://www.aidsmap.com) (July 21, 1999).
7. L. Mofenson and J. McIntyre, "Advances and Research Directions in the Prevention of Mother-to-Child HIV-1 Transmission," *The Lancet* 355 (June 24, 2000): WA27-WA34.
8. K. Brinkman et al., "Adverse Effects of Reverse Transcriptase Inhibitors: Mitochondrial Toxicity as Common Pathway," *AIDS* 12 (1998): 1735-1744; M. C. Dalakas et al., "Mitochondrial Myopathy Caused by Long-Term Zidovudine Toxicity," *New England Journal of Medicine* 322 (1990): 1098-1105.
9. O. A. Olivero et al., "Incorporation of Zidovudine into Leukocyte DNA from HIV-1 Positive Adults and Pregnant Women, and Cord Blood from Infants Exposed in Utero," *AIDS* 13 (May 28, 1999): 919-925.
10. O. A. Olivero et al., "[AZT] Transplacental Perfusion Kinetics and DNA Incorporation in Normal Human Placentas Perfused with AZT," Third Conference on Environmental Mutagens in Human Populations, February 18, 1999.
11. Watson et al., *Pediatric Infectious Diseases Journal* (May 1998), as quoted in Brink (See Note 1), 21.
12. Mir and Costello, *The Lancet* (1998). Study quoted in Brink (See Note 1), 21.
13. Brink (See Note 1), 33-34.
14. R. M. Kumar et al., "Zidovudine Use in Pregnancy: A Report on 104 Cases and the Occurrence of Birth Defects," *Journal of Acquired Immune Deficiency Syndrome and Human Retrovirology* 7 (1994): 1034-1039.
15. C. J. Newschaffer et al., "Prenatal Zidovudine Use and Congenital Anomalies in a Medicaid Population," *Journal of Acquired Immune Deficiency Syndrome and Human Retrovirology* 24, no. 3 (2000): 249-256.
16. E. Papadopoulos et al., "A Critical Analysis of the Pharmacology of AZT and Its Use in AIDS," *Current Medical Research and Opinion* 15, Supplement 1, (1999).
17. Brink (See Note 1), 97.

**For More Information:**

-- Christine Maggiore's book "What If Everything You Thought You Knew About AIDS Was Wrong?" is an accessible introduction to problems in AIDS science and policy. Maggiore is the founder/director of Alive & Well AIDS Alternatives, a nonprofit education, action, support, and research organization founded by a group of HIV-positive diagnosed people who live in health without AIDS drugs and without fear of illness. Phone and Fax: 1-877-92-ALIVE. Web: [aliveandwell.org](http://aliveandwell.org)

-- Health Education AIDS Liaison (HEAL) is a nonprofit network organization informing people of the evidence challenging many common beliefs surrounding HIV and AIDS. President: Michael Ellner. Contact: HEAL-NY, Old Chelsea Station, P.O. Box 1103, New

York, NY 10113. Phone: (212) 873-0780. Fax: (212) 873-0891. See also [www.healtoronto.com](http://www.healtoronto.com).

-- Continuum magazine began in 1992 as a UK-based self-help newsletter questioning HIV/AIDS dogma and developed into an international journal of culture, science, and alternative health. It is now an Internet publication: [www.continuum-magazine.org](http://www.continuum-magazine.org). Editor: Huw Christie.

-- "Rethinking AIDS" is the monthly publication of the Group for the Reappraisal of AIDS, a network of hundreds of scientists and AIDS analysts who have been pressing for ten years for an inquiry into AIDS science. Contact editor Paul Philpott, 1354 East Avenue, Suite R-120, Chico, CA 95926-7385. Web: [www.rethinkingaids.com](http://www.rethinkingaids.com).

-- Robert Laarhoven, co-organizer of the first international conference on alternative perspectives on AIDS (Amsterdam, 1992), has developed a website offering more than 250 articles on the HIV/AIDS controversy, including groundbreaking papers by Peter Duesberg and by the Perth group of scientists. Web: [www.virusmyth.net/aids/](http://www.virusmyth.net/aids/).

-- "AIDS and Stressors" (Medellin, Columbia: Fundacion Arte y Ciencia), by New York-based physician and independent AIDS researcher Roberto Giraldo, argues that AIDS signifies a worldwide increase in immunological stressors including toxins in food and the environment, recreational and medical drugs, and mental and emotional stress. The book can be ordered on HEAL Toronto's website: [www.healtoronto.com](http://www.healtoronto.com).