An Effort for A

Could vitamin A be a cheap, safe way to reduce mother to infant HIV transmission?

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Could a two-cents-a-tablet vitamin cut mother-to-child transmission of HIV? The corporate/government hype about AZT's supposed potency as a transmission interrupter has obscured the exciting research behind this key question; the net result is another denial of women's right to fully informed treatment choice.

Last year, the prestigious British journal *Lancet* published the remarkable results of research on vitamin A blood levels of pregnant, mostly early-stage HIV positive women in the East African country of Malawi. A team led by Dr. Richard Semba of Johns Hopkins University observed that among the 330 mothers whose children could be followed past a year old, 32 percent of the women most deficient in vitamin A transmitted HIV to their infants, versus 7 percent of women with above-normal levels.

The results are roughly comparable to last year's prematurely ended U.S. AZT study, ACTG 076, which found a 25 percent transmission rate among women on placebo versus 8.3 percent for those on AZT.

Medical texts have long labeled vitamin A "the anti-infective vitamin." It clearly offers great potential to reduce mother-to-child transmission in developing nations. But some U.S. researchers doubt the nutrient will help much in the U.S. They think the African findings (which included 60 percent vitamin A deficiency rate among the mother) may merely reflect extreme malnutrition. These scientists say that in this country, aside from those with advanced AIDS, few adults—and fewer pregnant women—with HIV have vitamin A deficiencies as measured by blood levels.

But Semba and other researchers say the recent information has raised the minimum vitamin A level previously considered essential to avoid deficiencies. And *The Merck Manual*, the mainstream medical bible, notes that "evidence of depletion is unobtainable in the pre-clinical stage [i.e., before obvious deficiency symptoms] except for a history of inadequate intake." This is because liver stores (where vitamin A is concentrated) are depleted before blood levels begin to fall. Lark Lands, a nutrition expert and health educator, notes that standard tests for vitamin blood levels "often vastly underestimate the true issue deficiency might be found with more sophisticated and accurate tests."

In fact, abundant evidence from studies at major universities and hospitals shows that—even by standard blood tests—people with HIV develop a host of nutrient deficiencies from the earliest onset of infection. And research conducted at University of California and St. Vincent's Hospital in New York City showed that people with advanced HIV are at significant risk for vitamin A deficiency.

The bottom line, according to University of Miami researchers: In HIV infection, high-dose supplementation restores proper nutrient levels without toxicity. Thus, the researchers propose higher "interim dietary recommendations" for people with HIV until further clinical data can be collected. Among these interim recommendations are vitamin dosages up to 25 times the recommended daily allowance (RDA). For vitamin A, they prescribe five times the RDA, with higher intake during bouts of diarrhea.

Lands says that food can not come close to supplying needed levels. For pregnant women, that means much higher dosages than standard prenatal tablets. To avoid possible toxicity from high doses of vitamin A, Lands recommends combining capsules of A with those of its nontoxic precursor, beta carotene. But she also emphasizes the importance of a whole-foods diet rich in A and beta carotene. Green leafy vegetables and yellow and orange fruits and vegetables are good sources; liver and dairy products are high in A but often near impossible for many HIV positive people to absorb.

Vitamin A deficiency may contribute to HIV transmission and progression in several ways. Since the nutrient is essential in maintaining mucous membranes, deficiency-induced breaks in the placenta or birth canal could aid transmission. And according to clinical trials in other diseases, supplementing children deficient in A increases CD4 cell counts, a finding paralleled by two small studies in adult men with HIV.

Of course, Public Health Service guidelines don't even mention the vitamin A findings. But the rush to judgment on AZT for pregnant women, combined with the exciting vitamin A and viral load findings, has hit a nerve. Women in the AIDS community have escalated their sharp questioning of the medical establishment. Increasingly, women as well as men are exploring and demanding alternatives. Who knows? A little self-empowerment could spark a wholesale rebellion against those who've kept everyone in the dark for so long. Stop reading and get busy.
