

Nutrients for the World **by Lark Lands**

Slowing disease progression in a simple way that promotes health and, ultimately, prevents illness and death is the holy grail in the world of AIDS. The impressive findings of three recently completed clinical trials tell us that drugs—with all their toxicity and expense and requirements for medical monitoring—are not the only way to contribute to that. And before some of you leap to conclusions I will say strongly: Yes, of course, we want to try to obtain antiretroviral drugs for everyone in the world currently living with HIV because, in the end, they are the most powerful way to prevent illness and death. But while we move toward the goal of providing drugs to all, a process that even the most optimistic know has been far too slow, we should look at another promising approach that may substantially help.

In two long-term studies which were carried out in the developing world, greatly reduced illness and death were seen in HIVers given simple nutrient supplements. In a third shorter nutrient study, done in the U.S., substantial increases in CD4 cells were seen. These findings are hugely important since the norm in HIV disease is to see the levels of CD4 cells (crucial immune cells) continually decreasing, ultimately leading to serious illness and death. Instead, the people in these studies saw the opposite: clear evidence of sufficient improvement in immune function along with body protection from damage to help prevent illness with the use of simple nutrient supplements.

These studies confirm years of previous research that has shown that HIVers with the highest levels of nutrients have the slowest disease progression. In fact, in a very large University of California at Berkeley study it was shown that those with the slowest disease progression had a level of nutrients not achievable by diet alone—in other words, the people who did the best over time were using nutrient supplements. Many other studies done over the years have shown a high level of nutrient deficiencies in HIV disease, and many positive benefits of higher levels of nutrients in people living with HIV/AIDS.

Two of the recent studies were done in developing-world populations without access to drugs. In fact, none of the participants were using highly active antiretroviral therapy (HAART). In the fall of 2003, the journal *AIDS* published the findings of a study of 481 Thai men and women living with HIV which found that among those who took a high-dose 21-nutrient supplement for a year, there were 63 percent fewer deaths among the group with less than 200 CD4 cells than in those on placebo—and an even more dramatic 74 percent fewer deaths for those with under 100 CD4 cells.

In this study, the benefit wasn't directly achieved by raising CD4 counts. According to Andrew Tomkins, M.D., the director of the London-based Center for International Child Health which helped run the study, "The likeliest theory is that the high doses of antioxidants in the mixture helped reduce tissue damage such that people died less frequently." Antioxidants are nutrients which counter the high level of body-damaging oxidative stress that has long been known to be

present in all stages of HIV disease. Dr. Tomkins believes that these antioxidant nutrients may help improve overall immune cell *function* even when the *numbers* of cells don't change. In their study's abstract, the researchers conclude by saying, "This could have important public health implications in the developing world where access to antiretrovirals remains poor."

In July 2004, an eight-year study of 1,078 Tanzanian pregnant HIV-positive women brought more good news—and to the pleasure of those of us who have been teaching the importance of nutrient supplementation in HIV disease for many years, generated global headlines. The study showed that those on a combo of three potent vitamin supplements had a 27 percent lower risk of death than those on placebos. The multivitamins also slowed disease progression by 50 percent. In this study, CD4 counts were boosted and viral loads lowered significantly in the supplement-taking group. And all this came at a yearly per-person cost of approximately \$12.00 U.S.

The third study, presented at a major AIDS conference in February 2004, looked at 40 U.S. HIVers who were already taking highly active antiretroviral therapy (HAART), a combo containing either d4T or ddI, and added to their programs either a 33-item high-dose nutrient formula, or a placebo. After a mere 12 weeks, the vitamin takers got a 24 percent jump in CD4 counts, whereas those on placebo saw only 2 percent more of these key immune cells. This study's findings strongly counter the often-heard belief of many North American physicians that although nutrient supplements might be important for the severely malnourished in Africa, they aren't important for well-fed HIVers. This study showed that, in fact, nutrient supplements are of huge benefit even in the well-fed population of North America.

While each study's nutrient formulas were different, B vitamins and antioxidants provided the common thread. All three contained B complex along with vitamins C and E; the Thai trial added minerals (including zinc, magnesium, and selenium) and other vitamins (including A, D, and K) commonly found in multiples; and the U.S. study added those plus alpha-lipoic acid, N-acetyl-cysteine (NAC), and acetyl-l-carnitine. The latter, along with higher-than-standard dosages of all the ingredients, are what study director Jon Kaiser, MD, an HIV specialist in California, credits with causing "the significant CD4 rises in such a short time." None of the studies reported any side effects from the nutrients.

The bottom line? It is time for AIDS activists everywhere to call for spreading the word that a combination of improved nutrition through diet and nutrient supplementation can make a huge difference in the lives of HIVers everywhere. In a world where the vast majority of people living with the virus do not yet have access to antiretroviral drugs, the use of inexpensive, non-toxic nutrients to boost immune function and help improve overall health and functioning while delaying disease progression could, quite literally, be lifesaving.

Harvard nutrition professor Wafaie W. Fawzi, Ph.D., who led the African study, says, "Introducing multivitamin supplements delays the time when antiretroviral therapy is necessary." Richard G. Marlink, M.D., who helps run treatment programs in six African countries as director of the Harvard AIDS Institute and scientific adviser to the Elizabeth Glaser Pediatric AIDS

Foundation, told the New York Times, “This is exciting because it costs literally pennies and can ward off the time when you need to begin treatment with expensive and toxic drugs.” And he went on to say that the studies would prompt him to recommend vitamins for his HIV-positive patients.

The facts are clear. It is far past time for nutrient supplements to be considered a basic part of HIV care for all. We know based on a large number of studies that nutrient deficiencies begin very early and adversely affect immune function, while also causing needless symptoms. Even in countries where HAART is available, the use of nutrient supplements throughout the disease process could help boost the immune system, slow disease progression, eliminate troubling symptoms, and delay the need to start drugs with all the side effects and complications that they can create. And when people do start drug regimens, nutrient supplementation can help counter side effects.

In the developing world, while we continue to work to make drugs ultimately available to all in need, this far less expensive, non-toxic, and much simpler therapy is something that we should all work passionately to provide to those living with HIV throughout the world. There is no magic wand to instantly make not only antiretroviral drugs but all the medical monitoring that needs to go along with their use instantly available everywhere in the world. It is something we are working on but even the most optimistic know that it will be a long time before a sufficient supply of antiretroviral drugs and the desirable medical care that needs to accompany use of the drugs will be available in every place in the world that there is AIDS. Giving completely nontoxic nutrient supplements does not require medical monitoring or follow-up care. And by comparison to even the best generic drug prices we have so far seen, the yearly cost for nutrients is vastly less. This does not mean that we don’t all continue to fight for having antiretroviral drugs available for every single person in need of them throughout the world. It just means that while we fight that battle, we work to provide this much simpler therapy, health-boosting nutrients, as well.

We can work to provide the benefits of nutrients to people living with HIV in two ways. The first is by improving overall nutrition. The problem of world hunger is immense and, again, there is no magic wand. But instead of looking at the overall picture and throwing up our hands and feeling that it is hopeless, we can work to just solve one problem at a time. One lovely recent example of this came from the efforts made by a small group of activists to teach people how to create permaculture gardens, a simple tool that can help provide nutritious organic food for those who might otherwise not have it. In the spring of 2003, five members of the Saltspring Organization for Life Improvement and Development (SOLID), a group of Canadian activists who are working with the people of the Vaal Triangle of South Africa, established a small permaculture garden there which now provides five families with fresh produce—a simple, easily achieved goal that has had a huge impact in this area with huge rates of unemployment, poverty and HIV infection. SOLID is now working to establish a large-scale permaculture food garden there to provide food for hundreds of families, a project that could be used as a blueprint in many other places.

Another simple idea that yielded speedy gains for people living with HIV is the Rapid Results income-generating and nutritional support project carried out by the Mozambique Red Cross. In this program, funded by the World Bank, people living with HIV/AIDS were given 100 chickens each, along with poultry feed and a chicken run. Red Cross volunteers worked with the recipients, teaching them how to use what they had been given to create a small income-producing business. They also provided help with small gardening projects that could produce a plentiful harvest of vegetables year-round. The result is both a steady source of nutritious food, and a long-term income for people who previously had neither. With each one of these small projects, people living with HIV and their families were given not only tools to provide for their basic needs, but also hope for the future.

Will these two simple ideas solve the problem of providing nutritious food for everyone living with HIV in the world? The obvious answer is no. But they are two steps in that direction. If we look at the success of many other programs that have been used in various parts of the world, we can find many other ideas for helping. What we cannot do is throw up our hands in despair and do nothing. While we work to make drugs available, we should work to make food and clean water, the very basics of human survival, available, as well. Once the food is present, we can, in very simple ways, teach people how to make the best food choices for improving nutrient status.

And the best approach for that? Ask the grandmothers. Ask the local people what foods are available in their communities that are nutrient-rich. I have done this in Africa and I got immediate answers from the grandmothers on the dishes that could be made from local foods that would be highly nutritious. Sadly, the westernization of diets throughout the world has meant that too many people have drifted away from the nutritious foods of their ancestors toward the junk foods of the 21st century. But the grandmothers still know better. With their guidance, the basics of good nutrition can always be adapted locally to help people make the best food choices from what is available to them.

With a nutritious diet in place, the second urgent need is to work in every possible way to make high-potency nutrient supplements available to all those living with the disease. This is not something that should replace the work we are all doing to make drugs available, but it should become an integral part of our work. The goal should be to obtain funding for multivitamin and mineral supplements to be produced inexpensively in the countries where they will be used, and then universally distributed. There is considerable evidence that appropriate use of nutrient supplements can counter oxidative stress, inflammation, and mitochondrial toxicity in ways that greatly help to protect the body from the negative effects of both HIV itself and the drugs used to treat it. By working to provide nutrient supplements to those in need, we could make an immense leap toward protecting the bodies of people living with HIV, slowing disease progression, eliminating symptoms, and greatly boosting overall health and wellbeing.

For more specific information on all the ways in which nutrients can protect the body and positively affect the lives of people living with HIV/AIDS, see Lark Lands' *Using Nutrients to Protect the Body and Counter HIV Symptoms and Drug Side Effects* at www.larklands.net

When you reach the website, click on Treatment Fact Sheets; then go to Fact Sheet # 4.

References for the studies discussed above:

Thailand study:

Jiamton S, Pepin J, Suttent R, Filteau S, Mahakkanukrauh B, Hanshaoworakul W, Chaisilwattana P, Suthipinittharm P, Shetty P, Jaffar S. A randomized trial of the impact of multiple micronutrient supplementation on mortality among HIV-infected individuals living in Bangkok. *AIDS*. 2003 Nov 21;17(17):2461-9.

Tanzania study:

Fawzi WW, Msamanga GI, Spiegelman D, et al. A randomized trial of multivitamin supplements and HIV disease progression and mortality. *N Engl J Med* 2004;351:23-32.

U.S. study:

J Kaiser, J Ondercin, G Santos, G Leoung, S Brown, M Mass, and M Baum. Broad-spectrum micronutrient supplementation in HIV-infected patients with dideoxynucleoside-related peripheral neuropathy: A prospective, double-blind, placebo controlled trial. 11th Conference on Retroviruses and Opportunistic Infections, San Francisco, February 8-11, 2004 [abstract 494].

University of California at Berkeley study:

Abrams B, Duncan D & Hertz-Picciotto, I. A prospective study of dietary intake and acquired immune deficiency syndrome in HIV-seropositive homosexual men. *JAIDS* 6:949-958, 1993.

Lark Lands is an internationally respected HIV/AIDS treatment expert, a contributing medical writer and editor for the American Academy of HIV Medicine, the Hepatitis C Caring Ambassadors Program, *The Positive Side*, CATIE's Practical Guides, the www.AIDSmeds.com website, and the Houston Buyers Club, and a long-time treatment activist, journalist, and educator. She is the author of the *Symptoms, Side Effects, and Serious Complications Series*, e-booklets with comprehensive information on treatment approaches to common problems seen with HIV disease and hepatitis (available by mid-summer 2005 at www.larklands.net).

A former think tank scientist and the long-time Science Editor of *POZ Magazine*, Lark was a pioneer in bringing attention to the need for a total integrated approach to HIV disease. In particular, her work and writing have focused on the significance of nutrient deficiencies in people living with HIV and the potential for good nutrition and nutrient supplementation to slow disease progression, resolve symptoms, and lessen side effects of drugs while improving their effectiveness. She teaches people how to integrate the best pharmaceutical treatment approaches from the world of Western medicine with supportive nutritional and complementary therapies. She believes that it is only through such integrated approaches that people can live *well* with HIV, not just longer.

As a respected AIDS journalist, Lark's articles have been widely printed and reprinted in AIDS newsletters and on websites, and distributed throughout North and South America, Europe, and Africa. Thousands of copies of her treatment fact sheets are distributed every year through PWA coalitions, buyers' clubs, and community-based AIDS service organizations. She has given her *Positively Well* seminar to thousands of people in the United States, Canada, and Europe, and is a frequent speaker at international, national, state, and local AIDS conferences.

For additional fact sheets, including in-depth information on eliminating drug side effects and other symptoms, as well as information on the "Living Well, Not Just Longer" seminar, go to: www.larklands.net The hundreds of articles she wrote in her years with *POZ Magazine* (as Science Editor) are available at www.poz.com. The many articles written for the Canadian AIDS Treatment Information Exchange (CATIE) magazine *The Positive Side* are available at www.catie.ca The CATIE website also has the Practical Guides she has written, including *A Practical Guide to HAART* and *A Practical Guide to HIV Drug Side Effects*.