

# AIDS: importance of nutrition confirmed

An 18-month study on more than 10,500 people with HIV/AIDS in Tamil Nadu found nutritional supplements improved their health

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In what may be the biggest study ever conducted in India, the Tamil Nadu AIDS Control Society (TANSACS) has found conclusive evidence that providing micro and macronutrients to people living with HIV/AIDS greatly improves their health and quality of life.

The 18-month study undertaken in association with Duke University was started in September 2005 in the State. It was undertaken in three centres, covering 10 districts, that provide anti-retroviral therapy (ART).

It involved the supply of both micro and macronutrients to people, both adults and children, who were on ART as well as those who did not require it. The objective was to study how nutritional supplementation helped in improving the subjects' health, which in turn improved the socio-economic parameters.

Macronutrient supplements (calories, protein, carbohydrate, fat and fibre) were provided to 10,780 people and micronutrient supplements (Vitamin A, B, C and folic acid, to name a few) in the form of tablets to 11,109.

The results are quite startling.

## CD4 count

The most significant improvement was seen in the CD4 count in those on treatment. A person infected with HIV is provided ART only when his/her CD4 count comes below 200.

In the case of those on ART, the CD4 count that was 113 at the time of starting the study, shot up to 309 six months after the supplementation programme, and finally reached 402 at the end of the 18-month study period. In the case of those who do not require ART, the improvement was marginal — 494 at the start to 515 at the end of the study duration.

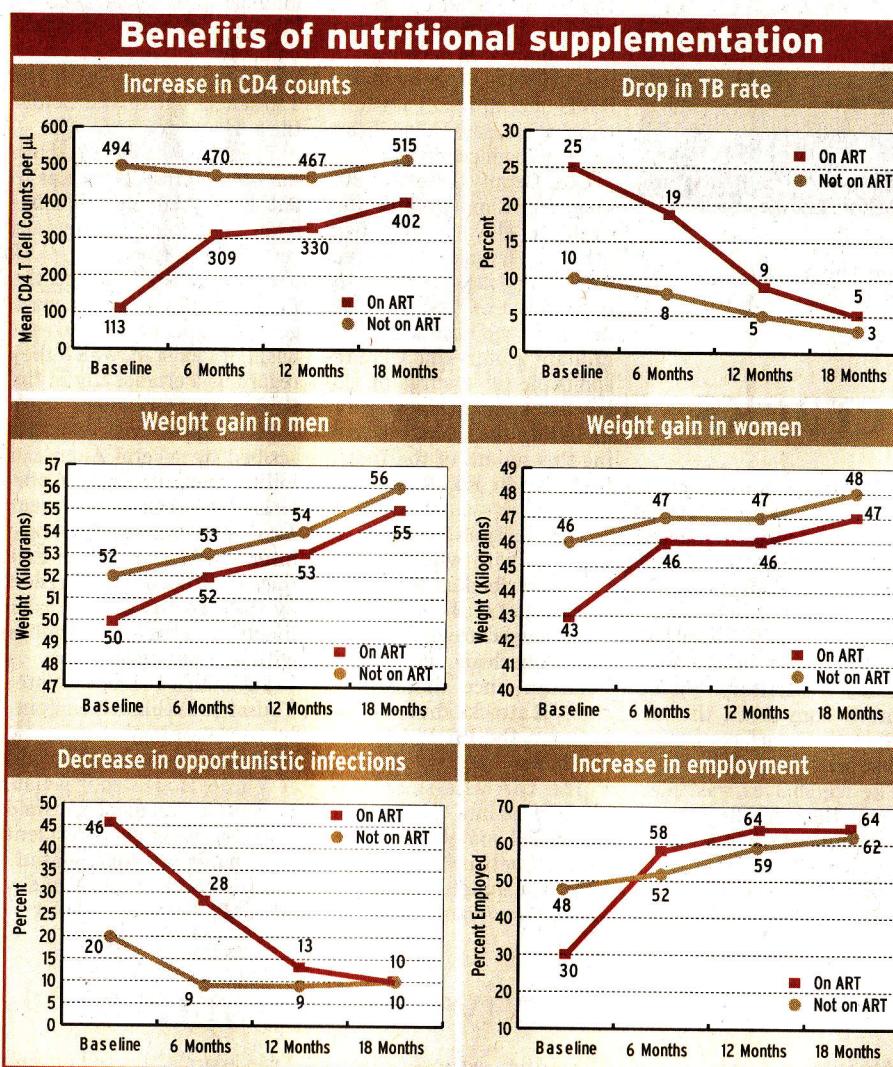
It must be remembered that CD4 count indicates how good the immune system of a person is. It is particularly important in the case of HIV/AIDS as the virus destroys the very immune system that is supposed to fight it. So a higher CD4 count reflects a strong immune system and hence its ability to fight the virus.

## Delay progression

The study has thus confirmed what is well known. Good nutrition plays a vital role in keeping the CD4 count higher. "This will help in delaying the progression of the disease," said Ms. Supriya Sahu, Project Director, TANSACS.

This means that it will take a longer time for a person to reach a stage where he would require medication. And for those already on ART, an improvement in CD4 count delays the onset of AIDS related health problems.

Apart from improving the CD4 count, good nutrition also helped people gain weight. Weight gain was 5 kg in the case of men and 4 kg in the case of women on ART; it was 4 kg in men and 2 kg in the case of women who were not did not need treatment.



"We did not see a direct relationship between micronutrients and weight gain," said Ms. Sahu.

The 6- and 12-month results were so very encouraging that we introduced the supplementation programme

in all the 26 ART centres in the State," she said. The programme introduced in March-April 2007 covers 21,000 people who are on ART.

Tamil Nadu has initiated the supplementation pro-

gramme although it is not a part of the national agenda.

## TB co-infection

Good health is not just about keeping the CD4 count higher. A healthy person with a robust immune system is

less likely to become actively infected with TB. Though many Indians are infected with TB bacteria at any given point of time, a person becomes diseased only when the immune system is weak or compromised. That is precisely the reason why co-infection with TB is seen more commonly in people with HIV/AIDS.

The study found that as the health of people improved, the rate of TB dropped. Again the most significant drop was seen in those on ART — from 25 per cent co-infected with TB at the start of the study to 5 per cent at the end of the study period. This is only to be expected as those on ART had a weaker immune system. In the case of those who did not need treatment, TB rate dropped from 10 to 3 per cent after 18 months.

Other than TB, the major opportunistic infections affecting people with AIDS showed a drastic drop from 46 per cent to 10 per cent at the end of the study period. The drop was 20 to 10 per cent in the case of those who did not require ART.

## Percentage employed

Employment is one of the biggest casualties as health deteriorates. It has been well documented that the ability to remain employed drops significantly as the disease progresses and the person's health deteriorates.

But with the nutritional supplementation improving health, the percentage of people being employed showed a very significant jump. It had the greatest impact on those

who were on ART — the percentage more than doubled from 30 at the start of the study to 62 after 18 months.

In the case of those who not on ART, the percentage increase was 48 to 64 at the end of 18 months.

Analysis of the data showed that improved health was not just about being employed. The number of hours worked in a week shot up from 11 to 31 at the end of one year and then dropped to 27 at the end of 18 months in those on ART. The second group showed a steady increase from 19 hours to 27 hours for the same period.

The increase in the number of hours worked thus resulted in more income generation in both groups — those on ART and those who were not.

In the case of children, the school going status and attendance improved significantly.

In the end, nutritional supplementation is not all about health benefits. It also leads to better psychosocial and socioeconomic outcomes.

"The take home message is simple," Ms. Sahu said, "one needs to take care of one's health the moment one gets infected with HIV. Else the CD4 count starts to drop, body weight starts to reduce and there will be increase in opportunistic infections."

And the cost is just Rs.900 per person per year. "It is very reasonable," she noted. Of course it is, if one considers the savings that would result from the government not spending money on medicines for TB and other opportunistic infections that would afflict persons with AIDS.