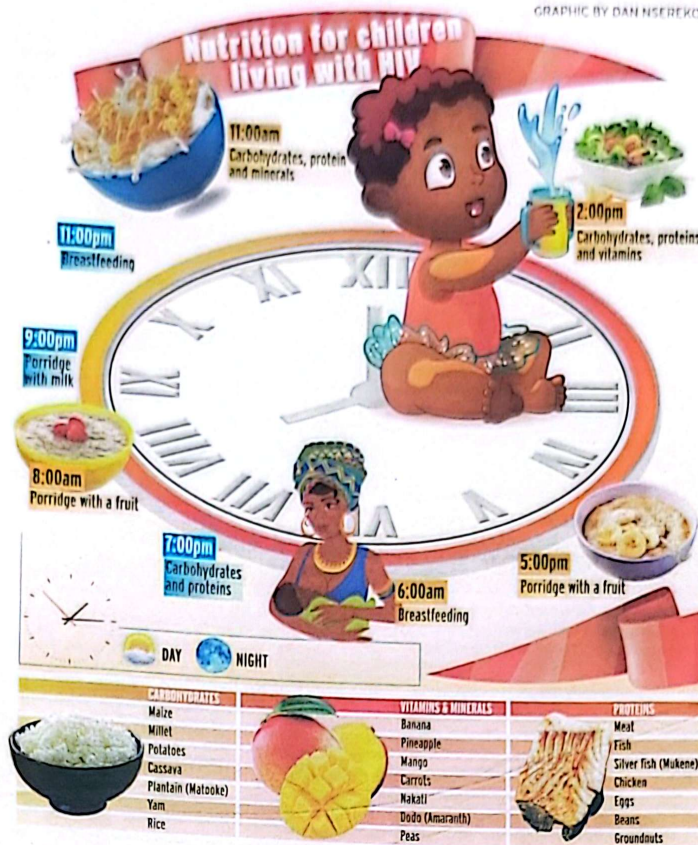


# HIV positive children: Boost immunity with proper nutrition

GRAPHIC BY DAN NSERIKO



## Assessing your child

On how a parent can assess whether a child is receiving adequate nutrition, Joel Kimera, a paediatrician at Norvik Hospital in Kampala, says one has to pay attention to the age-appropriate milestones such as crawling. Is the child achieving those? The other aspects a parent can assess are a child's weight and height: are these increasing?

He says a mother who is well-versed with the age at which the older children achieved milestones may experience concern over delay to acquire key milestones for the young one.

Also, when malnutrition sets in, especially severe protein energy malnutrition, a child who had acquired age-appropriate milestones may begin to regress, which may follow a prolonged illness or hospitalisation.

World Health Organisation provides growth charts that are reflected on immunisation cards. Kimera says when the child is born, the birth weight is supposed to be recorded and routinely thereafter with subsequent hospital visits.

"The child is expected to double his/her weight between four and six months and to triple weight between nine months and one year," he says.

Both parents and doctors are encouraged to have children's weights and other necessary parameters recorded each time they visit clinics, especially on immunisation days.

midday and a snack at 6:00pm, then serve supper at 8:00pm," she says.

Nutritionists advise mothers to continue breastfeeding the child up to at least one year.

### What to eat

A child living with HIV should eat eight times a day in small portions, advises Magoola.

These meals must have foods from the different groups, which are proteins, carbohydrates, vitamins and fats.

Magoola says every meal should have first-class proteins, which are obtained from animal foods such as milk, eggs or meat.

Proteins, which are body-building foods, are categorised into two based on their source, that is, plant or animal.

"Animal proteins are found in eggs, milk, meat, chicken and fish. Foods rich in plant proteins are peas, beans and groundnuts," Nabalayo says.

Prepare foods rich in carbohydrates, which are energy-giving foods. Foods rich in carbohydrates include maize, cassava, potatoes and matooke.

Vitamins help the body fight diseases. These nutrients are found in fruits and vegetables such as carrots, bananas and oranges.

"When serving a child food, add one teaspoon of either olive oil or sunflower oil because these are sources of energy," Magoola says.

Children living with HIV also require zinc to boost their immunity and protect them from opportunistic infections

such as tuberculosis and meningitis. Sources of zinc are brown rice, pumpkin seeds and cashew nuts.

### Preparing meals

Parents are advised to ensure the porridge is thick enough to be eaten, not drunk.

"The foods should be well-cooked and prepared in a hygienic place to avoid diseases such as diarrhoea," Matovu says.

Foods should be served at room temperature. Cold foods may contain bacteria and cause infections, while hot foods affect sores in the mouths.

### Affordability

Magoola says ensuring a balanced diet does not need to cost an arm and a leg, especially if one grows their foods or visits fresh foods markets for good deals. For instance, a meal that contains beans, potatoes and silver fish (*mukene*) is affordable.

### Food supplements

Nabalayo says food supplements are recommended only when one's body is deficient of any nutrients and is unable to get them naturally.

Only a nutritionist should recommend food supplements when necessary and after tests have been done to confirm the deficiency.

Just like Jacinta, parents can ensure children living with HIV are healthy by providing them with the right foods and make sure they (children) adhere to medication.

## BIG BREAK

Eating a balanced diet and adherence to antiretroviral therapy will improve the child's survival

By Lindah Niwenyesiga

Jacinta, a mother of three, is HIV-positive. When her youngest child was only three months old, Jacinta discovered he had been exposed to HIV. Jacinta got to know about her child's HIV status when she went to the health centre for early infant diagnosis.

She was worried about raising her child at a tender age. However, a paediatrician counselled her on ways to ensure her child lives a healthy and long life such as providing nutritious foods.

"I wondered where I would find money to buy the required food for the child, but with guidance from doctors, I purchased foods such as beans, sweet potatoes and *dodo* required to ensure my child gets a balanced diet and adherence to antiretroviral therapy drugs, Jacinta's child, now three years old, is living a happy and healthy life.

Proper nutrition is critical for any child's mental development, physical growth and overall wellbeing. On the other hand, poor nutrition can have adverse effects on a child, including death.

According to figures from the World Health Organisation (WHO), under-nutrition is estimated to be linked to 2.7 million child deaths annually or 45% of all child deaths. For children living with HIV, proper nutrition makes the difference between life and death.

Approximately 95,000 children aged 0-14 are living with HIV in the country, according to the Uganda Population-Based HIV Impact Assessment report 2017.

The UNAIDS Data 2017 states that as of 2016, 47% of children living with HIV were on antiretroviral drugs (ARVs), while 53% were not. Children who are on ARVs require proper nutrition to boost their immune system.

Joel Kimera, a paediatrician at Norvik Hospital in Kampala, says there is a strong interrelation between nutrition, immunity and disease.

Nutrition is important for the growth and stability of one's

immune system, especially the lymphoid organs where cells responsible for immunity are stored. Thus, severely malnourished children have been found to have lowered immunity.

Such children, especially when exposed to or infected with HIV, can easily progress to AIDS along with opportunistic infections such as chronic diarrhoeal diseases and tuberculosis.

According to Nicholas Matovu, a nutritionist and Global Health Corps fellow at the Ministry of Health, poor nutrition for children living with HIV also results in weight loss and malnutrition.

Proper nutrition for any child starts during pregnancy. That is why expectant mothers are urged to eat a balanced diet and go for antenatal visits as prescribed by health personnel so as to deliver healthy babies.

And when a child is born and turns out to be HIV-positive, how should they be fed to keep them in good health?

### Breastfeeding

According to the WHO infant and young child feeding guidelines, children, regardless

of their HIV status, are supposed to be exclusively breastfed up to six months. That is, from zero to six months, the only thing a baby should be fed on is breast milk. At that age, a baby's gut is delicate and the only food they can easily digest is breast milk.

### Weaning the child

After six months, breast milk is no longer sufficient in meeting a child's nutritional needs. In addition, at this age, the gut has hardened and can handle other foods apart from breast milk.

Matovu advises that when a child is weaned, they should be given a diet rich in carbohydrates, vitamins, minerals and water.

Children between six months and one year should be given semi-solid foods such as porridge, according to Sarah Muitta Magoola, a nutrition co-ordinator with Mildmay Uganda.

"Whether you choose millet or maize porridge, ensure you add either milk or a raw egg," she says. Magoola says these

items are important so as not only to make the porridge tastier, but also improve its nutritional value.

A child should also be given semi-solid food such as mashed potatoes, rice and porridge.

Deborah Nabalayo, a nutritionist in Kampala, says due to the fact that some children living with HIV develop sores in their gut as a result of the condition or as a reaction to medicine, they should be fed soft foods that they can easily swallow. Such foods must be well-prepared and mashed.

Children living with HIV require proper feeding because they are given strong medication. Without proper nutrition, the bodies cannot handle the toxicity of ARVs. Nabalayo advises that such children should be given food in small quantities throughout the day.

Make sure you break down the meals. "For instance, you could give the child breakfast, porridge at 10:00am, lunch at

**95,000**

The estimated number of children living with HIV in Uganda