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What children eat in their earliest years shapes survival, learning and future productivity. Yet for many families, nutrition is constrained by habits, misinformation and limited choices. As Uganda confronts persistent malnutrition, there is growing recognition that change requires informed communities and stronger policies. Through a month-long campaign from April to May, *New Vision*, in partnership with UNICEF and the Ministry of Health, spotlighting the challenges and solutions shaping children's diets and their chances of a healthy start.

By Agnes Kyotalengerire

Good nutrition before and during pregnancy is essential for healthy maternal outcomes and for giving babies the best start in life. Maternal, newborn and child health experts agree that a woman's nutritional status affects her ability to conceive, sustain pregnancy and deliver a healthy baby.

FOLIC ACID REDUCES BIRTH DEFECTS
Folic acid, also known as folate, is one of the most critical nutrients in early pregnancy.

WHAT PREGNANT MOTHERS MUST EAT

Dr Imelda Namagembe, a senior consultant gynaecologist at Mulago National Referral Hospital, explains that folic acid supports red blood cell production.

"A mother is supplying oxygen not just to herself, but also to her growing baby and placenta. Without enough healthy red blood cells, this system becomes inefficient," she notes.

Without enough folate, a woman can suffer anaemia, leading to fatigue, weakness, dizziness or shortness of breath and increasing the risk of pregnancy complications.

According to the *Uganda Demographic Health Survey 2022*, anaemia among women rose from 16% in 2016 to 25%, with 44% of children also affected.

Folic acid deficiency can cause neural tube defects, such as spina bifida and hydrocephalus, adds Dr Namagembe. Hydrocephalus occurs when cerebrospinal fluid accumulates in the brain faster than it is absorbed in the bloodstream, creating pressure.

Spina bifida arises when vertebrae fail to form properly, leaving an opening in the spine. This can result in nerve damage and a sac filled with fluid on the baby's back that contains membranes surrounding the spinal cord. These defects occur within the first four to six weeks of pregnancy, often before a woman realises she is pregnant.

Dr Namagembe advises women planning to conceive to begin taking folic acid at least two months before pregnancy. She notes that supplements may cause constipation and recommends eating plenty of vegetables to ease this.

Beyond supplements prescribed during antenatal care, folic acid can be obtained from food. Dark leafy vegetables, such as *nakati*, *dodo* and pumpkin leaves are rich sources, as are legumes like beans and peas.

Other options include liver, dairy products, mushrooms, maize, eggs and fruits, such as oranges,

mangoes and avocados.

Fruits and vegetables are the most reliable sources of folic acid because they are consumed fresh or minimally processed, explains Shafik Mayanja, a nutritionist with NUTRI CORP Uganda. To preserve folate, which is destroyed by heat, vegetables should be cooked lightly. He advises adding fruits and vegetables at every meal to compensate for folate lost during the cooking of meat or dairy.

Dr Namagembe also stresses the importance of de-worming before conception and during pregnancy, since intestinal worms interfere with iron absorption, worsening anaemia and undermining maternal nutrition.

A WELL-BALANCED DIET SHAPES LIFELONG HEALTH
Nutrition during pregnancy has long term effects



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ADEQUATE HYDRATION
Staying well-hydrated is essential for pregnant women. Adequate fluid intake supports blood circulation and digestion, which helps keep both mother and baby healthy, says Dr Peter Wanyera. Pregnancy hormones can slow digestion, leading to constipation. Fluids help keep the digestive system moving smoothly, improve nutrient absorption and reduce issues, such as bloating and constipation. Water is the medium through which vitamins, minerals and glucose are carried in the bloodstream to the baby. Without enough fluids, this transport system becomes less efficient, which can affect growth. Dr Wanyera advises pregnant women to take about three litres of fluid daily. This can include safe drinking water, fresh fruit juices and millet porridge. Pregnant women also urinate very frequently. Increased fluid intake helps compensate for this loss and prevents dehydration.

that extend into adulthood.

Dr Andabati Gonza, a senior consultant gynaecologist at Bethany Women and Family Hospital, recommends a balanced diet including proteins, carbohydrates, fruits and vegetables both before and during pregnancy. Exposure to adequate or inadequate nutrition in the womb influences future reproductive health. He explains that good maternal nutrition supports the proper development of the foetal reproductive system.

This process, known as foetal programming, affects future fertility, hormonal balance and the timing of puberty. Protein is particularly important for

reproductive tissues. Deficiencies may reduce fertility later in life, lowering egg count in females and affecting testicular development in males. Sources of protein include beans, cowpeas, groundnuts, chicken, liver, fish, beef, milk and eggs.

Carbohydrates and moderate amounts of fat are also essential because they provide the energy needed for pregnancy.

Pregnant women are warned against heavy consumption of fast foods, which are high in fat. Excessive fried foods, such as chicken and liver contribute to over-nutrition and pregnancy complications, explains Dr Peter Wanyera, a gynaecologist at Mbale Regional Referral Hospital.

Over-nutrition occurs when nutrient intake exceeds the body's needs. It is characterised by excessive calories, fats and sugars and can lead to obesity, diabetes, cardiovascular disease and fatty liver. Excess sugar may also be transferred to the unborn baby, increasing the risk of birth complications and later metabolic disorders. Under-nutrition is equally concerning. Reduced food intake leads to poor health and impaired foetal development. Malnourished mothers face a higher risk of weakened immunity, intrauterine death (a baby dying in the womb) and underweight babies.

AVOID ALCOHOL, SMOKING AND EXCESSIVE CAFFEINE
Avoiding harmful substances is essential for maternal and foetal health. Smoking significantly increases the risk of complications and damages the DNA of the unborn baby. It is considered the most preventable risk affecting pregnancy.

Alcohol consumption raises the risk of foetal complications, particularly in the first trimester when the baby's brain is developing, explains Dr Andabati. Because pregnancy is often not detected immediately, abstaining from alcohol when planning conception is the safest option.

Excessive caffeine intake has been linked to negative outcomes. Pregnant women are advised to limit caffeine from coffee, tea and energy drinks to help protect both mother and child.

MEAL PLANS TO NOURISH MOTHER AND BABY EVERY DAY

A pregnant woman's meals should be balanced, regular and nourishing to support both her body and the baby's growth. She also requires about two extra meals because her body has high nutritional and energy demands during pregnancy. Fausta Aketch, a nutritionist based in Lira city, provides the following guidelines.

- BREAKFAST**
- Porridge (millet, maize, or oats) with milk
 - Boiled eggs or groundnut paste
 - A fruit (banana, pawpaw, or

orange). Such a meal provides energy, protein, iron and folate.

- MID-MORNING SNACK**
- Groundnuts or roasted soybeans
 - Fresh fruit or yoghurt. This helps maintain energy and prevent dizziness or nausea.

- LUNCH (MAIN MEAL)**
- Staple: Matooke, rice, posho, or sweet potatoes
 - Protein: Beans, peas, fish, chicken, or meat
 - Green leafy vegetables: Dodo,

nakati, or *sukuma wiki*

- Take water or fresh juice. This supports growth, blood formation and strength.

- AFTERNOON SNACK**
- Fruit (mango, apple, pineapple). Boiled maize or whole-grain bread. Such snacks keep blood sugar stable and prevent overeating.

SUPPER
Similar to lunch, but in smaller portions, include vegetables and protein, for example, beans

with greens or fish with sweet potatoes. Importantly, eating early in the evening reduces heartburn and discomfort.

BEFORE BED (OPTIONAL)
If hungry, take warm milk or a light snack. If recommended foods cause nausea or vomiting, you can opt for alternatives to ensure proper nutrition:
● Replace intolerable foods with similar nutrients. For example, if meat is difficult to eat, choose

beans, eggs, or groundnuts for protein.
● Start with simple, tolerable foods, for example, dry toast, crackers, plain porridge, then gradually improve the diet.
● Try different preparation methods, for example, boiled, instead of fried, cold, instead of hot.
However, if the mother cannot keep food down or is losing weight, it is important to seek medical advice, as this may indicate a more serious condition requiring care.