

Why you need Zinc in your diet

By Jacqueline Emodet

At the mention of a balanced diet, the first thought that comes to mind is that it is made of major food groups of carbohydrates, proteins and vitamins. Rarely does one think of minerals such as zinc.

This may be attributed to the fact that zinc, like other minerals, are micro-nutrients, which means the body needs them in small quantities. Although the average adult needs between five to 10 milligrammes daily, it does not reduce the importance of minerals.

"Zinc is necessary for functions such as building the immune, nervous, digestive and reproductive systems," says Dr Vincent Karuhanga, a general practitioner at Friends Polyclinic in Kampala.

The recommended amount of zinc varies with sex. Dr Karuhanga says men need an average of 9.5 milligrammes daily, while women require about 7 milligrammes.

Jamiru Mpiima, a nutritionist at Victoria University Hospital, explains that men need a higher amount of zinc because they lose the nutrient during ejaculation.

"A man loses four grammes of zinc whenever he ejaculates. So if it is not replenished, its loss will affect the quality of sperm," she says.

Dr Karuhanga says zinc is responsible for production of testosterone, a hormone that is important for men's sexual and reproductive development.

"Testosterone is responsible for sperm production. Therefore, when there are issues with testosterone production, a man might have low sperm count. The sperm will also have unstable membranes," he explains.

Sperm with an unstable membrane cannot mature to a stage where it gets the mobility and strength to make the long



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journey through the vagina, cervix and into the uterus to fertilise the egg.

Zinc deficiency in men can also cause erectile dysfunction.

"Erectile dysfunction is one of the commonest male sexual issues caused by nutritional, psychological and medical factors. In the nutritional aspect, if one lacks zinc then the testosterone levels will be low, which affect the quality of erections," Karuhanga explains.

Testosterone is also vital in a man's masculinity. Karuhanga notes that if boys have zinc deficiency during puberty, they may suffer from delayed development of their secondary sexual characteristics.

Puberty is a stage in physical development when a child's body matures into an adult one capable of sexual

reproduction. In males, it is characterised by development of facial hairs, deepening of the voice, muscle bulk, pubic hair and change of body odour.

"Zinc deficiency may affect the development of secondary sexual characteristics, leading to delay in muscle bulk, deepening of the voice and even growth of a beard," Karuhanga states.

Women too need zinc. The mineral plays essential functions during reproduction, that is conception, implantation and a favourable pregnancy outcome.

"Zinc is also responsible for the production of female sexual hormones like oestrogen and progesterone which are important for ovulation," Karuhanga says.

Mpiima adds that after conception, zinc fosters the

brain development of the foetus.

Zinc is also a crucial mineral found throughout body cells. It helps in cell division and growth, wound healing and breaking down macronutrients, for example, carbohydrates into glucose for energy.

Josette Ssanyu, a public health dietician, says zinc strengthens the immune system and fights off disease.

"The importance of zinc to the immune system gained prominence during the early days of HIV treatment. Those with low zinc levels were vulnerable to infections so the mineral became an important component of nutrition for people living with HIV/AIDS," Ssanyu says.

The mineral is also important for the lining of the intestines (intestinal mucosa)

Sources of zinc

"When a man fails to make a woman pregnant, it is not surprising that medical personnel will advise him to eat pumpkin seeds because they are rich in zinc. The seeds can be boiled or fried," Dr Vincent Karuhanga, a general practitioner at Friends Polyclinic in Kampala says.

Josette Ssanyu, a public health dietician adds that zinc can also be got from watermelon seeds, which can be chewed. Other sources of zinc are meat, fish, turkey, milk, mushrooms, eggs and unpasteurised milk. Dr Karuhanga explains that pasteurising milk leads to loss of minerals, so they have to be re-applied.

Effects of zinc deficiency

A deficiency of zinc can lead to chronic episodes of sickness, fatigue, loss of libido, stunted growth in children, poor hair and nail formation, infertility, irregular menstrual periods and chronic diarrhoea.

One can also experience loss of appetite, taste, smell, hair loss, poor concentration, neurological defects such as Aggression and Attention Deficit /hyperactivity disorder and slow healing wounds.

Dr Vincent Karuhanga notes that vegans are the most vulnerable to zinc deficiency because their diets exclude meat, eggs, dairy products and animal products. Ssanyu advises vegans to eat legumes such as cashew nuts, simsim seeds, which are plant sources of zinc.

According to Dr Karuhanga Zinc deficiency is diagnosed through a blood test, urine test and an analysis of one's hair to measure your body's content.

thus stabilising the gut and stimulates healing as well as repair of the gastrointestinal tract.

Zinc also protects the gut from anti-inflammatory drugs like painkillers for headaches and stomach pain, which can make the intestinal lining leak. A leaking gut causes undigested food particles, toxic waste products and even bacteria to leak through the intestines and flood the bloodstream. This can make the body respond with allergic reactions such as migraines, chronic fatigue, food allergies and a running stomach.

The brain needs zinc. Mpiima explains that zinc boosts one's memory and is involved in impulse transmission through the nervous system. For instance,

when one is burnt, cells known as neurons transmit the message to one's brain which will then tell you that there is pain in that burnt area. The neurons do not do this in isolation, they carry the messages using electrical signals called the nerve impulses.

"Zinc fosters the process by acting as a conductor which transmits the electrical signals (nerve impulses)," Mpiima says.

Consuming excess zinc
Zinc should not be consumed in high amounts (zinc toxicity). This happens when someone over consumes zinc supplements. It will manifest with loss of appetite, stomach cramps, nausea, headaches and diarrhoea.