

# Want to know more about gut health for your kids?

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What if I tell you that in our body, there exist trillions of beneficial microorganisms? Not only do they help us digest food, but they also play essential roles in boosting mental and physical health. In addition, they protect us from damaging pathogens.

A child first gets microbes from its mother during birth. As humans mature, they get microbes from the surrounding environment, food, and the people they interact with. Modes of the delivery of birth affect the microbes. Moreover, a breastfed child has different types of microbes from that of a child who had little or no breast milk. Differences in early life microbes can be linked to later life diseases such as allergies and obesity.

Interestingly, mother's milk has nutrients for both a child and its microbes. The oligosaccharide found in mother's milk is considered as a food (prebiotic) for microbes. A child cannot consume this, so it becomes the food for microbes. Shifting to complementary food from milk increases the diversity of microbes in a child's body. Microbes grow with the growth of a child.

#### Benefits:

- Microbes help our immune system grow. The immune system



of a child learns which germs are dangerous and which are safe. In a germ-free environment or exposed to too many antibiotics, the system cannot mature. So, it cannot distinguish nonpathogenic chemicals. This can cause food allergies or autoimmune disorders.

- A healthy gut not only keeps the digestive system working properly, it also promotes stable

mood, happiness and a stronger memory. Our brain and gut have two-way interactions that happen through some neurotransmitters.

- Intestine microbes produce different vitamins, including vitamin B12, Thiamine and Riboflavin, and K which are necessary for good health.

#### Foods for gut:

*Pre-biotic:* Prebiotics are dietary

fibers that stimulate microbes' growth and activities in our body. Prebiotics are found in fiber rich food like asparagus, onion, oatmeal, walnut, Jerusalem artichokes, garlic, leeks, pulses, and bananas. We should include prebiotic food in our everyday diet to get the beneficial effects of gut microbes.

*Pro-biotic:* Probiotics are live microbes which are available

in different foods and as supplements. Probiotics help balance our "good" and "bad" bacteria to keep the body working properly. In this situation, it is a good idea to get probiotics from food. Sourdough bread, fermented vegetables like kimchi, sauerkraut, tempeh and dairy products like yogurt, kefir, and aged cheeses are good sources of probiotics.

#### Recommendations:

- Feed your microbes properly by including gut healthy foods in your diet.

- Let children help in the garden and play with pets to promote diverse microbes.

- Get enough sleep at night. Losing just two days of sleep can destroy beneficial microbes.

- Avoid unnecessary antibiotics.

- Don't sanitise everything.

- Timing of the meal is

- important as well as relaxing during eating instead of rushing.

- Stress is an enemy of gut health.

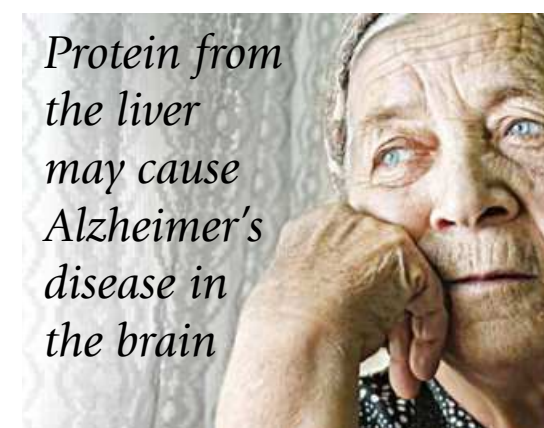
- Exercise is necessary.

- More emphasis should be given on personalised nutrition that takes into account differences in human character, habits, and social environments besides physiological differences or diseases.

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## DID YOU KNOW?

Protein from the liver may cause Alzheimer's disease in the brain



The liver's amyloid protein can promote brain dementia, reports PLOS Biology. The data show that the liver may play a significant role in the initiation or progression of Alzheimer's disease.

Deposits of amyloid-beta (A-beta) in the brain are one of the pathological hallmarks of Alzheimer's disease (AD) and are implicated in neurodegeneration in both human patients and animal models of the disease. But A-beta is also present in peripheral organs, and blood levels of A-beta correlate with cerebral amyloid burden and cognitive decline, raising the possibility that peripherally produced A-beta may contribute to the disease. The scientists discovered that mice exhibited neurodegeneration and brain atrophy, as well as neurovascular inflammation and capillary malfunction, both hallmarks of Alzheimer's disease.

This study's findings show that A-beta produced in the liver may contribute to human disease. They may have huge consequences for understanding Alzheimer's if that contribution is large. Most disease models to far have focused on A-beta overproduction in the brain, which resembles rare genetic Alzheimer's cases. The vast majority of AD cases, however, do not appear to be caused by A-beta overproduction in the brain. A high-fat diet, for example, may increase A-beta liver production.

Its effects on brain capillaries could be crucial in the illness process. This discovery demonstrates that a person's diet and some medications that target lipoprotein amyloid could potentially reduce their risk or halt the progression of Alzheimer's disease.

## HEALTH bulletin

# Waterborne diseases and water supply



### Optimising Tuberculosis preventive therapy for persons with HIV

Tuberculosis (TB) continues to be common comorbidity among persons with HIV, particularly in high-burden countries. While preventive therapy reduces the risk for TB, worldwide adoption and scale-up have been poor. In a study conducted in three African countries, investigators randomised participants to one of three groups: weekly rifampine and isoniazid for three months, given annually for two years or given once, or six months of daily isoniazid.

TB preventive therapy represents a useful strategy to lower risk for active TB among persons with HIV; however, its global uptake has been suboptimal, in part because of potential recipients' concerns that their risk for TB will return to baseline after completion of treatment. In this study among persons with HIV on antiretroviral therapy, a short course of weekly rifampine-isoniazid had better completion rates than daily isoniazid (although repeating the weekly treatment a year later provided no further benefit).

These encouraging findings should trigger advances in guidelines and practice. Unfortunately, rifampine remains unavailable in most of the world — a situation that must be rectified before such advances can become reality.

PROF M KARIM KHAN

For good health continuous access to a safe water supply is mandatory. Sometimes, supplied water contains dirt and other impurities that is not drinkable. In most tested cases, drinking water is not up to the mark.

Well, pure water means purified water, that is water from a source that has removed all impurities. Distilled water is the most common form of pure water. Drinking water should be colorless, odorless, devoid of any harmful microorganisms, it should be free from suspended impurities, it should contain some minerals and salts, necessary for our body. According to World Health Organisation (WHO), it is a big challenge to ensure safe drinking water everywhere, for everyone, though it is their right.

Safe drinking water and safe water for cooking, bathing and other cleanliness is very important to maintain a healthy life. We are all aware of water-borne diseases. Just for remembrance Diarrhea, Dysentery, Cholera, Amebiasis, Typhoid, Hepatitis A and E are very common diseases that can occur through contaminated water. In a broader sense, Waterborne diseases are conditions caused by pathogenic micro-organisms that are transmitted in water. The disease can be spread while bathing, washing, or drinking water, or by eating food exposed to contaminated water.

WHO says that every year, more than 3.4 million people die as a result of water-related diseases, making it the leading cause of disease and death around the world.



"Safe water, effective sanitation, and hygiene are critical to the health of every child and every community — and thus are essential to building stronger, healthier, and more equitable societies," said UNICEF Executive.

Once Bangladesh had a big challenge of safe drinking water for all but later tubewell water solved that problem. But unfortunately in some areas tube well water contains Arsenic and producing arsenicosis.

Treating surface water by filtration and through the chemical process can be made safe enough. To make

supplied water more safe boil it for twenty minutes and then filter it before consumption. If boiling is not possible water purifying tablets may be used. In our country bottled waters are also not always safe, so we are to be cautious about that.

Drinking water must be safe enough and to be ensured by the respective authority and supply to be maintained constantly. Take care and have good health.

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### The new face of comorbidities

Today, 85% of people dying from NCDs between ages 30 and 70 are in low-middle income countries (LMICs).

Many LMIC health systems continue to be influenced by global health funding and the shape of this has critical impacts on the health care available — or not available — for the growing number of people who are living with NCDs in LMICs.

Those with chronic illnesses are more likely to be hospitalised or die from COVID-19. The vast majority of those who died or became critically ill from COVID-19 had underlying health issues, most typically hypertension, cardiovascular disease, and diabetes.

HIV-positive people are more prone to heart disease and several malignancies. TB patients are more prone to diabetes and vice versa. Many pregnancies are affected by hypertension and gestational diabetes, which can have lifetime consequences for both mother and child. Cancers (9.3 million), respiratory diseases (4.1 million) and diabetes (1.7 million) account for the majority of NCD mortality (1.5 million). These four diseases cause nearly 80% of all NCD deaths under the age of 70.

In a recent groundbreaking promise made at the UN High-Level Meeting on AIDS, world leaders underlined the need to deliver better integrated services that encompass NCDs.

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## Know ALZHEIMER'S Disease

### Early warning signs

- Trouble remembering things
- Mood or personality changes
- Trouble completing ordinary tasks
- Difficulty with planning or problem-solving
- Difficulty expressing thoughts

World Alzheimer's Day  
21 September 2021