

ABC of Vitamins

Our panel of experts gives you a lowdown on vitamins and their role in the body. Check if you know what you need to know

Reema.Gehi
@timesgroup.com

The human body is like a power engine. Just as a machine needs to be fuelled constantly, our body must be replenished regularly with vitamins for it to function properly. Vitamins, which func-

tion as catalysts and coenzymes, protect cells and are important links in the metabolic armour. Yet, very little is understood about these essential components.

Each of the vitamins - A, C, D, E, K and B (B1, B2, B3, B5, B6, B9 and B12) - has an individual role to play in the body. Barring vitamins B12 and D3, vitamins A, B, C, and E are dietary.

Most people believe that if they take a multi-vitamin tablet they won't fall ill, or when they cross 40 they must supplement their diet with one. Some people also believe that if they're stressed or dieting they must then double their dose of vitamins in order to compensate.

In fact, if the multi-vitamin contains iron and minerals it leads to gastric problems. So also, vitamins - A, D3, E and K - are fat-soluble. A high-dose of these vitamins can become toxic in the body and in extreme cases may even lead to mental and neurological changes like memory lapses, tremors as well as urinary incontinence.

DEFICIENCY

There is no clinical syndrome or arithmetic to prove that if you do not intake vitamins and food today there will be a paucity of it in a couple of weeks. A lot depends on your food reserves and how much you utilise your body.

The most dependable way to replenish your body with adequate amounts of vitamins you must follow a well-balanced diet. However, it is not enough to simply consume them. You should also ensure they get absorbed into your system.

Erratic lifestyles, eating late, not chewing the food properly, bingeing before going to bed, consuming too much oily stuff or junk food, antibiotics, caffeine, alcohol restrict the absorption of vitamins and nutrients in the body. Consumption of excess alcohol requires the vitamin B complex group for it to be metabolised. When alcohol gets into the system, the liver gets too busy trying to metabolise it and doesn't find the time to do its natural work, which is manufacturing proteins. Likewise, people who smoke, go on crash diets, or intake other harmful substances can run down on vitamin reserves as well.

Diabetics have a high-deficiency of various vitamins. Vegetarians too have a lower reserve. One must go for an annual blood-test to check vitamins B12 and D3 levels as the two are unavailable in general dietary fibres. If you're low on these vitamins, you must take supplements as prescribed by the doctor.

Here are the vitamins you should ensure you get:

VITAMIN A

(RETINOL/BETA CAROTENE)

It's needed for healthy eyes and bone development. It also helps in healing infections as it strengthens the immune system and enhances the production of RNA (Ri-

bonucleicacid).

FOUND IN: Cod liver oil, egg, yellow fruits and vegetables. Carotene rich foods like spirulina, wheat grass, sweet potato, carrots, green onion, spinach, Chinese cabbage, melons, peaches, yellow peppers and mango.

VITAMIN B1 (THIAMINE)

It helps in converting glucose into energy.

FOUND IN: Brown rice, millet, wheat germ, nuts, wheat bran and sprouted grains.

VITAMIN B2 (RIBOFLAVIN)

It helps in the conversion of fats, sugar, proteins into energy and the formation of red blood cells. **FOUND IN:** Milk products, yeast extract, organ meats, eggs, mushrooms and asparagus.

VITAMIN B3 (NIACIN)

Your cells breathe because of vitamin B3. It promotes healthy skin and maintains blood sugar levels.

» PAGE 27

CHITRANGDA SINGH'S VITAMIN FUNDAS

I believe in natural sources of vitamins. There is so much available in nature itself. Every fruit and vegetable has so many natural vitamins that I don't need to subscribe to artificial sources. That is because I eat healthy. I try and maintain a balanced diet by making sure my body gets what it needs. But a lot of youngsters these days don't believe in eating vegetable and fruits so I would recommend that they have multi-vitamins as essentials.



REVITALISE WITH

- Vitamin A - EYES
- Vitamin B1 - CONVERTS GLUCOSE INTO ENERGY
- Vitamin B2 - RED BLOOD CELLS
- Vitamin B3 - SKIN
- Vitamin B5 - SKIN
- Vitamin B6 - ANTI-DEPRESSANT, NERVOUS SYSTEM
- Vitamin B9 - RED BLOOD CELLS
- Vitamin B12 - NERVOUS SYSTEM, RED BLOOD CELLS
- Vitamin C - TISSUE HEALING, BONES, TEETH
- Vitamin D3 - BONES, TEETH
- Vitamin E - LIVER
- Vitamin K - BLOOD CLOTTING

VITAMIN A

VITAMIN E

VITAMIN B3

VITAMIN B5

VITAMIN B6

VITAMIN B2

VITAMIN B9

VITAMIN D3



» PAGE 26

FOUND IN: Whole grains, legumes, fish, chicken, turkey as well as mushrooms.

VITAMIN B5 (PANTOTHENIC ACID)
This helps in the production of anti-stress hormones. It also promotes healthy skin, hair and nerves.

FOUND IN: Egg, chicken, mutton, fish and vegetables such as mushrooms, avocados, whole-wheat, lentils and sunflower seeds.

VITAMIN B6
Vitamin B6 is considered to be an anti-depressant. It's also involved in blood formation, is fundamental for protein metabolism and nervous system function.

FOUND IN: Meat, salmon, banana, broccoli, red kidney beans, asparagus, cauliflower, cabbage and all green leafy vegetables.

VITAMIN B9 (FOLIC ACID)
This vitamin is important for pregnant women as it helps the synthesis of DNA and protein. It is also essential for red blood cell formation.

FOUND IN: Whole grains, chicken, liver, spinach, red kidney beans, raspberry, beet root, asparagus, cashews, peanuts, chick peas, avocado, wheat germ, and tomato juice.

VITAMIN B12
Helps maintain healthy nervous system, required for normal growth and production of red blood cells. It also helps break down fatty acids. Vitamin B12 is manufactured only in the colon, that too in inadequate quantities.

FOUND IN: It is not a problem for meat eaters. Unfortunately, the only source for vegetarians is the faecal content in water and that doesn't help. Some fermented food like quick pickles, soya, tofu and spirulina have B12.

VITAMIN C
This aids in tissue healing, formation of bones and teeth. It is also a rich anti-oxidant.

FOUND IN: Fruits and vegetables like guava, lemons, papaya, strawberry, melon, grapes, sprouted seeds, beans, broccoli, bell peppers, oranges, parsley and cauliflower.

VITAMIN D3
This is essential for metabolism, skeletal formation and teeth. It promotes the absorption of calcium. Yet only 10-15 per cent of the vitamin content comes from a balanced diet. The rest is derived from sunlight, which is absorbed through the skin.

FOUND IN: Sunlight. Long-hours in air-conditioned spaces and pollution make it hard. Even sunscreen lotion prevents absorption. We need supplements of Vitamin D3. Consuming fish, sardine, tuna, egg, and green leafy vegetables also helps.

VITAMIN E
A healthy dose of vitamin E detoxifies the liver. It is an antioxidant, protects cells and helps maintain red blood cells.
FOUND IN: Soya beans, broccoli, green leafy vegetables, sunflower seeds, whole grains, nuts, legumes, outer leaves of cabbage, asparagus, cucumbers and sprouted grains.

VITAMIN K
It is important in the blood clotting process.
FOUND IN: The cabbage family - broccoli, green and red cabbage, pack choy flower, cauliflower, turnip, knol khol (ganth gobi), legumes, potatoes, tomatoes, alpha alpha, asparagus and green leafy vegetables.

Our panel includes Consulting Physician and CardioMetabolic Specialist, Dr Hemant P Thacker, Endocrinologist and Diabetologist, Dr Hemraj Chandalia and Microbiotic Food Consultant, Shonali Sabherwal.