

Vitamins (essential Micronutrients)

	Source	Function	Deficiency
A 0.8-1mg/day M.S.	Animal Source - Retinol Plant Source - B-carotene leafy Vegetables, Carrot , Pumpkin Sweet Potato	→ vision → healthy skin → mucus membrane → bone & teeth → immune system	Night blindness xerophthalmia in man
D Calciferol 0.01mg/day Calciferol	Egg Yolk, liver, fatty fish, milk Steroid vitamin	→ Needed for proper absorption of Ca	→ Rickets → osteomalacia
E Vitamin of youth 0.001mg/day Tocopherol	Muscular Weakness Sterility	→ Antioxidant → protect cell wall → Keratinisation of epidermal cells	(soyabean, corn, sunflower) liver, nuts & seeds
K phyllo-quinone	leafy vegetables, spinach, broccoli, asparagus, produced in intestinal tract	→ Needed for proper blood clotting → synthesis of prothrombin	Haemorrhage xerophthalmia in man

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The Ronaldo ND Paolo played for Biochemist's Football club

B1

Thiamin (T84)

Cereals,
legumes,
nuts, Peas
seeds
cantaloupe

important to Nerve
function, brain
heart, muscle

Beri-Beri

B2 (Revising)
Riboflavin

Normal
vision
→ skin
health
mucous
membrane

Milk & Milk products,
leafy green vegetables
Whole grain bread,
cereals, mushrooms
Almonds

Stomatitis, Angular
stomatitis
Dry skin
Cracks in lips
Cheilosis

(notes)

B3 (Niacin)

Meat,
Fish, liver
Peanut
butter
Tuna,
salmon

→ Nervous system
→ Digestive system
→ Skin health
→ Convert food into energy

Pellagra, liver damage

Pantothenic Acid

B5 (Panto)

Part of
an enzyme
needed for
Energy
Metabolism
Red Blood cells

widespread
in food.
avocado,
sweet potatoes

Acne / Paresthesia

<p>Biotin B7 Build</p>	<p>Widespread in food, also produced in intestinal tract</p>	<p>Part of an enzyme needed for energy metabolism</p>	<p>Halo loss, brittle nail</p>
<p>Pyridoxin (B6) (Practice)</p>	<p>Transport of oxygen, regulation of DNA Make of red blood cells</p>	<p>Meat, fish, fruit, vegetables</p>	<p>→ Anemia (microcytic) → Peripheral neuropathy → Dermatitis</p>
<p>Folic Acid Folate B9</p>	<p>→ make DNA & new cells</p>	<p>orange juice, liver, most refined grains, green vegetables</p>	<p>Anemia (macrocytic)</p>
<p>Careed Cobalamin (V12)</p>	<p>Neuro function Castle in intrinsic factor involved in absorption</p>	<p>Seafood, eggs not found in plant cells, bound in microorganisms</p>	<p>Pernicious anemia Megaloblastic Anemia</p>
<p>Ascorbic Acid (V12c)</p>	<p>Citrus fruit Kiwi, Strawberry, Tomato</p>	<p>Important for collagen, protein metabolism, immune system, aids in iron absorption</p>	<p>• Scurvy • Body fatigue • Poor wound healing</p>