My Child’s Best Multivitamin

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Introduction

Children during their growth require adequate nutrition to maintain their optimal growth, body composition and development.

Healthy children take their diet micronutrients and macronutrients from natural sources (exposed to sun light on daily basis, taking adequate and balanced nutrients which contain of protein (e.g., meat, poultry, fish eggs, nuts, legumes), vegetables, fruits, and grains (e.g., breads, cereals, pastas) and dairy products. Fats, oils and sweets are separated and it is recommended that they be “used sparingly”. Healthy diet protects them against vitamin deficiency and prevents them from disease and provides reserves in times of stress.

Vitamins and minerals are essential for life and maintenance of normal health, these acts as cofactor in many enzymes systems and are therefore cardinal for various bodily functions.

Vitamins are classified into two broad groups:
1. Fat-soluble vitamin (A, D, E, A.K) and
2. Water-soluble vitamin B (B1, B2, B3, B6, B12, Biotin, Folate, Pantothenic acid), and vitamin C.

Water-soluble vitamin are easily absorbed and are not stored in the body in any great quantity. Fat-soluble vitamin are absorbed with fat, and stored in the boy and thus their deficiency in the diet May takes longer to affect nutritional status.

Minerals (iron, calcium, phosphate, potassium, copper, iodine, zinc, selenium, magnesium, chromium) are inorganic elements that are an essential constituent of the diet they serve many different biological function including structural calcium in bone, transport iron in hemoglobin, energy metabolism,

Since not all children will take their daily nutritional requirements as they supposed to take, therefore some of them manifest with symptoms of vitamins deficiencies which will affect their health.

Clinical signs of micronutrient deficiency occur late and may go unrecognized, most common deficiency in children iron and vitamin D, Parents are advised to do regular pediatric visit to assess nutrition and growth state of their children, Parents should keep in mind for every pediatric visit to discuss with their pediatrician about;

1-Recommended nutritional requirements, recommended dietary intake, assessment of nutritional status for his or her age.
1. BMI for his or her age.
2. Growth charts. Change in weight or in height maybe an indication for acute or chronic malnutrition.
3. Head circumference (is influenced by nutrient status until age of 3 years).
4. Hemoglobin level and vitamin D level on yearly basis.

5-In some cases where clinical symptoms unspecific or unrecognized, or in under nutrition, underweight, advisable to do specific test spectra cell micronutrients testing(HEPART) test, which looking for moment and time nutrient status, it’s a new test available in our clinic, it shows intracellular level of vitamins in the white blood cells(WBC). Some children may be at risk of developing deficiencies because of inadequate intake, vegetarian diet, vegan diet, or impaired vitamin synthesis or malabsorption in disease states such as cystic fibrosis, chron’s disease, Sickle-cell disease, administration of phentoyin, or isoniazid therapy in a pregnant teenager. Where they require supplementation of specific vitamins.

2. Recommendation For Parent Dr. Esam Haddad Specialist Pediatric In Our Clinic Advice

1. Get your child diagnosed for any symptoms of vitamin or minerals deficiency.
2. Get your child hemoglobin and vitamin D level cheeked every year routinely
3. Appetite stimulants are contraindicated in healthy children.
4. Commentary and Alternative Medications (CAM) include (Herbal remedies, there safety and efficacy remain largely

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Citation: Esam Haddad (2017) My Child’s Best Multivitamin. BAOJ Pediat 3: 045.
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unknown, herbal supplements can be sold for supporting and promoting health rather than treating disease.

5. Multivitamins chewable or syrups and others forms, they can have very toxic side effect if they exceed their Dietary reference intake (DRI) for example:

6. Taking vitamin D >50,000 IU / daily may cause; hypercalcemia, vomiting, constipation, nephrocalcinosis. The recommended upper limit for long -term daily vitamin D intake are 1.000 IU for children <1 year & 2.000IU for older children.

7. Taking Vitamin A >20,000IU/day may cause: Vomiting, increased intracranial pressure, (pseudo tumor cerebri), irritability, headache, insomnia, dry desquamating skin, myalgia and arthralgia, abdominal pain hepatosplenomegaly, cortical thickening of bones of hands and feet’s. Routine use of vitamin A is not recommended.

8. If parents choose to give their child a supplement, and the child does not seem to be taken an adequate variety of foods, a standard pediatric vitamin -mineral with nutrients no higher than the DRI (dietary Reference Intake) may be indicated, particularly during period of rapid catch-up growth. Megadsoses doses should be avoided.

9. Vitamin D3 should be given for term breastfeed infants from birth till one year of 400 I.U continually on daily bases.

10. Vitamins and minerals supplements recommended for infants include Vitamin K at birth, Vitamin D supplementation for elusively breast-fed infants by 15 days of age, and supplement iron source by 4 to 6 months of age as per recommendation American academy of pediatrics.

11. Stable preterm infant’s B/W less than 2500 g recommended all multivitamin (vitamins +minerals) of 1 ml/d, iron 2mg/kg/d beginning after age 2 weeks until age 1 year.

12. At the end get your child Hemoglobin and Vitamin D level checked every year routinely. Written by Dr. Esam Haddad specialist pediatric. Reviewed by Dr. Samer Jouhar consultant pediatrics acting head of Pediatric & Neonatology SKGH.

References