

# Nutrition for growth and health

VITAMIN D levels in Malaysia are suboptimal across most age groups. The Nutrition Survey of Malaysian Children (SEANUTS Malaysia) was carried out to comprehensively assess the nutritional status of Malaysian children and unveiled some unexpected results – almost half of the children are vitamin D-deficient<sup>(1)</sup>.

Possible reasons for the deficiency could be due to low dietary intake of vitamin D, calcium and lack of sun exposure among children living urban and sedentary lifestyles<sup>(2)</sup>. Vitamin D is frequently added into breakfast cereals or cow's milk. However, vitamin D3, in particular, is not commonly added into these foods.

Vitamin D3 is a type of D vitamin that most nutrition experts believe should be utilised in clinical practice<sup>(3)</sup>. Vitamin D3 or cholecalciferol is formed in the body when the skin synthesises sunlight on its surface.

Staying indoors most of the time could cause a deficiency in this sunshine vitamin and a possible negative impact on bone growth. Nutrition for early childhood should be a balance between dietary energy intake and regular physical activities. To maximise height growth, achieving healthy muscles and bone structure is necessary through adequate intakes of protein, calcium and vitamin D3.

## Protein for height growth, muscles and bones

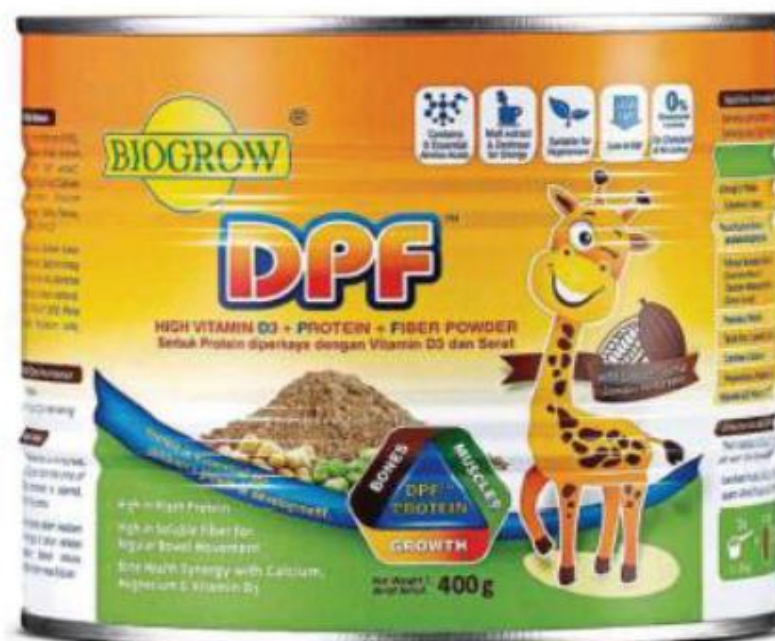
Protein is made up of building blocks called amino acids. Complete protein provides all 22 different amino acids, but nine essential amino acids must be consumed from the diet because the body is not able to synthesise them. Histidine, Leucine and Lysine are the three specific, essential amino acids required for the

production of growth hormones in the body.

Compared with taking calcium supplements alone, a combination of calcium and protein with other nutrients, such as Vitamin D3 and Magnesium would produce higher bone density and structure for optimal growth<sup>(4)</sup>.

In accordance to health claims allowed on food products by Ministry of Health (MOH) Malaysia:

– Protein is essential for growth and development,



Biogrow DPF High Vitamin D3 + Protein + Fiber Powder with cocoa flavour is specially formulated to meet the nutritional needs and dietary requirement of growing children.

- Calcium aids in the development of strong bones and teeth.
- Magnesium promotes calcium absorption and retention.
- Vitamin D helps the body utilise calcium and phosphorus.

## Grow tall and strong with Biogrow DPF

Biogrow DPF High Vitamin D3 + Protein + Fiber Powder with cocoa flavour is specially

formulated to meet the nutritional needs and dietary requirement of growing children with the rich chocolatey taste they love. One scoop (~ 25 g) of Biogrow DPF:

- Provides over 27% of plant protein (from non-GMO soy and pea), with all nine essential amino acids.
- Is high in calcium, magnesium and vitamin D3 for bone health.
- Is high in soluble fibre dextrin for digestive health.

Biogrow DPF is a unique combination of plant protein and fibre with additional bone and digestive health benefits.

It contains soluble fibre (wheat-resistant dextrin) to promote regular bowel movement, especially for people with a tendency of constipation. Dextrose and malt extracts are added as a source of instant energy for children and active individuals.

In addition, Biogrow DPF is dairy-free, lactose-free and suitable for all ages, including vegetarians and adults leading active lifestyles.

■ For queries, call 03-7956 2220 (Monday to Friday, 9am-5pm) or e-mail [info@biogrow.com.my](mailto:info@biogrow.com.my).

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## References

- <sup>(1)</sup> Poh et al., Br Jr Nutr, 2013
- <sup>(2)</sup> Khor et al., 2011. High prevalence of vitamin D insufficiency and its association with BMI-for-age among primary school children in Kuala Lumpur, Malaysia, 11, 95.
- <sup>(3)</sup> Mark A. Moyad, MD, MPH. Vitamin D: A Rapid Review. *Dermatology Nursing*. 2009;21(1).
- <sup>(4)</sup> Lister et al., 2007. Current topics in nutraceutical research, 5, 67-82.