Vitamin D – the role for HCPs

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Vitamin D The role for HCPs



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- Why are we concerned?
- 4 What is the role of the HCPs?

- New government recommendations
- 6 Availability of supplements
- How would wider vitamin D supplementation reduce NHS costs?

1 What is vitamin D?

- ? Vitamin or hormone
- Made in the skin in D3 form (cholecalciferol) when outside in daylight
- Becomes active via the liver then kidney and some other cells
- Vitamin D receptors in all cells in the body
- Good biochemical and physiological evidence for bone health
- Epidemiological evidence for growth, development, dental health, immune system and prevention of autoimmune diseases and cardiovascular health

Very little in the UK diet:

- Oily fish is the best source
- Small amounts in eggs and meat
- Fortified foods formula milks, some yogurts, some breakfast cereals
- Supplements

Other countries fortify more foods

e.g. USA, Canada, Finland

Two forms of vitamin D

Vitamin D₃ (cholecalciferol)

From sunlight, oily fish, meat and eggs

In some supplements

Superior with longer half life

Vitamin D₂ (ergocalciferol)

Very, very small amounts in mushrooms

In some supplements

Why the concern?

Decreased cutaneous synthesis with

- Lower sunlight intensity with increasing distance from the equator
- Dark pigmented skins in northern climates such as UK
- Climate and cloud cover

- Air pollution
- Increasing age
- Mainly indoor lifestyles
- Sunscreen use
- Clothing covering most of the skin fashion or cultural traditions
- 30-40% of all age groups in UK vitamin D deficient in winter
- Lower levels in those overweight or obese

Survey of 1000 new and pregnant mums

70%

are not aware of government advice on taking vitamin D supplements



43%

are not aware that vitamin D is made in the skin only during the summer months in the UK

36% pregnant mums

say they are not planning to give vitamin D to their children 38%

do not know the importance of vitamin D for their children



Misconceptions about where vitamin D could be found



Vegetables 23%



Cheese 13%



Nuts 13%



Bananas 10%



Orange Juice 15%

Role of HCPs

A healthy balanced diet provides adequate nutrients except vitamin D (NDNS)

Government recommendations on vitamin D intake since 1991:

- 10ug/day during pregnancy, breastfeeding and over 64 years
- 7ug/day from 1 to 3 years
- Breastfed infants: 7ug/day from 6 months (or from 1 month)
- Formula fed infants having less than 500mls formula: 7ug/day



Survey of 1000 new and pregnant mothers

73% of mums
think they had not
been informed of
the benefits of
vitamin D from their
HCP



82% of mums are not aware of the difference between vitamin D₂ and D₃

1/3 said they had never been advised at all on the need to take vitamin D

Role of HCPs - NICE PHG 56 (2014)

Raise awareness

Advise on supplementation

Make vitamin D supplementation accessible locally

Make Healthy Start supplements accessible locally



Government policy 1991/1998/2012:

- 10ug/day during pregnancy, breastfeeding, at risk groups and over
 64 years
- 7ug/day from infancy to 5 years

NICE Healthy Start Vitamins (Aug 2015)

 Special report on cost effectiveness to CMO

 Costing of universal provision of free vitamin D/HS supplements in pregnancy, breastfeeding, infants and under fives Findings: cost effective if given to:

- all mothers before pregnancy and up to at least twelve weeks
- all infants from birth
- all under fives

https://www.nice.org.uk/article/pmg25/chapter/Executive summary

Over the counter preparations

Recommend:

- brands sold in pharmacies, not health food shops
- in vitamin D₃ form

Vitamin D only: Baby D, Boots, Colief, D-drops

Vitamin D as part of a multivitamin:

Boots, Health Aid, Pregnacare, Sevenseas, Vitabiotics

6 DH Policy Change Imminent

- Scientific Advisory Committee on Nutrition (SACN) Review
- Currently out for consultation

Recommendations:

- 10ug/day vitamin D for all populations over 12 months of age
- 7 8.5ug/day for infants under 12 months

https://www.gov.uk/government/consultations/consultation-on-draft-sacn-vitamin-d-and-health-report

Reduced NHS costs with wider vitamin D supplementation

Reduced prevalence of:

- Pre-eclampsia during pregnancy
- Dental caries in under fives
- Hypocalcaemic fits and cardiomyopathy in young infants
- Autoimmune diseases
- Rickets in older infants, toddlers and adolescents
- Mental health
 - Cardiovascular disease
- Osteomalacia in adults

