



**York Teaching Hospital**  
NHS Foundation Trust

# **Vitamin D and your child's bone health**

Information for patients, relatives and carers

## **Children's Services**

① For more information, please contact:

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Caring with pride

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## **Why is Vitamin D important?**

Vitamin D is important for maintaining strong healthy bones. In children, a lack of vitamin D can cause rickets. Rickets is a disease which results in bowing of the bones frequently seen in the legs, muscle weakness, an increase in susceptibility to fractures, bone pain and poor dental health.

## **What is Vitamin D?**

Vitamin D is a naturally occurring substance that helps the body to regulate its levels of calcium and phosphate, which in turn are important for giving bones their strength. Vitamin D is not found naturally in many foods (only eggs and oily fish) and is added in the UK to all infant formula and some brands of cereal and margarine. Most vitamin D that we get is obtained from sunlight and absorbed through the skin. It is thought that many people in the UK do not have adequate vitamin D levels, as we have a limited number of days where the sun is high enough to provide this vitamin D. The application of sun cream, whilst vital to prevent sunburn and skin cancers, also limits the body's ability to absorb vitamin D.

## Who are at risk of low vitamin D levels?

Research has shown that some groups of people are more at risk of having low vitamin D levels:

- Infants (0 to 3 years), teenagers, pregnant or breastfeeding women, adults over 65 years of age
- People of African or Asian descent living in the UK
- People who have limited mobility, for example, people in wheelchairs, and children with cerebral palsy
- People with liver, kidney and some types of gut disease
- People who are on medications to treat epilepsy and drugs used to treat tuberculosis
- People with epilepsy and seizures, especially if they have temporal lobe seizures

## Why are we recommending vitamin D supplements?

As we have limited sun exposure and vitamin D in our diet it is nationally recognised that supplementing vitamin D levels, especially for those people who are in groups that are at risk of low vitamin D levels, will help improve their bone and muscle health.

National guidelines have been issued in 2017 for children with cerebral palsy, which recognise that it does not take much force to cause a bone fracture if the bone is weak from reduced mobility. This is also true for children and young people who have other conditions which limit their ability to walk or cause them to have low bone strength or density.

Children taking sodium valproate (Epilim), carbamazepine (Tegretol), Phenytoin or Phenobarbital may have low bone density due to these drugs causing a reduction in bone strength.

We would particularly recommend that children with cerebral palsy, taking drugs for epilepsy or who are not able to walk should all have a regular supplement of vitamin D, as low vitamin D levels are a further risk factor for fractures to occur.

## What supplements do we recommend?

Vitamin D supplementation is recommended for all groups of people who at risk of low vitamin D levels.

In newborn infants up to one year old, including both breast fed and bottle fed infants, the recommended dose is 300-400 units of vitamin D per day. These doses are recommended by from the Royal College of Paediatrics and Child Health, as well as the UK government. This dose is available without a prescription as abidec, dalivit, Baby D drops or any multivitamin which has 300-400 units (8.5-10 µg/mcg/micrograms) of vitamin D per day.

In children and adults over one year of age, the recommended dose is 400-1000 units (10-25 µg/mcg/micrograms) of vitamin D per day. This dose is available without a prescription, examples are: abidec, dalivit, Boots High Strength Vitamin D, Ddrops, Holland & Barrett SunviteD3, DLux oral spray, SunVitD3 and Vitbiotics tablets.

In some children, the doctors may prescribe a stronger dose of vitamin D which can be obtained from a pharmacy with a prescription. This is usually when a blood test has been taken because the doctors feel that it is necessary to check the child's vitamin D levels and the result shows that the levels are very low. The stronger dose is usually given for a few months only and then supplements are recommended to prevent the levels becoming low again.

## **Tell us what you think of this leaflet**

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact:  
Consultant Paediatricians, The York Hospital, Wigginton Road, York, YO31 8HE or telephone 01904 725314.

## **Teaching, Training and Research**

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

## **Patient Advice and Liaison Service (PALS)**

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services.

PALS can be contacted on 01904 726262, or email [pals@york.nhs.uk](mailto:pals@york.nhs.uk).

An answer phone is available out of hours.

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Owner

Dr G Williams, Consultant Paediatrician

Date first issued

Dr I Abbey, Consultant Paediatrician

January 2018

Review Date

December 2019

Version

1 (issued January 2018)

Approved by

Paediatrics Clinical Governance Group

Document Reference

PIL 1167 v1

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