

# To fortify or not to fortify?

**Laura Street**

**Senior Nutrition Manager UKI**

*Kellogg's*<sup>®</sup>

“WE ARE A COMPANY OF DEDICATED PEOPLE, MAKING QUALITY PRODUCTS FOR A HEALTHIER WORLD”

W.K. KELLOGG, 1906.

## KELLOGG WAS THE FIRST COMPANY TO:

- **1920s:**

The first to employ a **dietitian** to work in the food industry.

- **1930s:**

The first to print **nutrition information** on pack

The first to **fortify** its products in response to public health needs.

- **1980s:**

The first to add **folic acid** to its products to help guard against neural tube defects in unborn babies.

- **2011:**

Lead the way and fortified all of our family and children’s range with 25% of the NRV for vitamin D

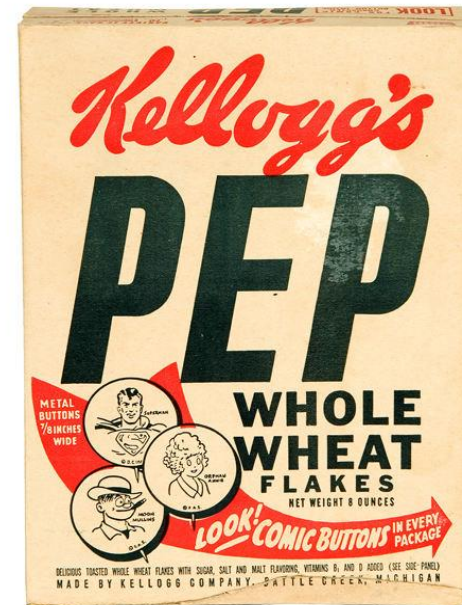
- **2018:** Fortifying many of our cereals with 50% of the NRV for vitamin D



# The first fortified cereal: PEP



Kellogg's® Pep™, became the first cereal fortified with vitamins through the "spray" method in 1930s



*Kellogg's*

# Current Fortification at Kellogg



6 B vitamins  
including  
folic acid

Iron

Calcium

Vitamin D

Zinc

*Kellogg's*



# Vitamin D: Category leadership in health

## A vital vitamin for health



**BUT...**  
**Half** of all children have low vitamin D levels

## Interest has never been higher



29% take vitamin D supplement  
78% want vitamin D food fortification

## Kellogg's leading the agenda

**2011**

25% daily needs

**The Telegraph**

Kellogg's adds vitamin D to cereal to fight rickets

Kellogg's is to add vitamin D to all its children's cereals in a bid to fight the rise of rickets among young people.



**2018**

Highest level in the cereal category



**5p DAILY EXPRESS**

**SHOCKING RAPE OF 90-YEAR-OLD WOMAN ON A BRITISH STREET**

**AUTISTIC BOY HEALED BY THE LOVE OF HIS HORSES**

**GET ELLY GRIFFITTS' NOVEL: THE CROSSING PLACES FOR JUST £1**

**VITAMIN D CUTS BLOOD PRESSURE**

And sunshine is best way to get your daily dose

**What a bargain... How the Royals cost you just £6**

**VITAMIN D TO YOUR RESCUE**

According to new research, taking vitamin D supplements lowers blood pressure and boosts fitness. What does experts think you should do now?

**Sunscreens can lead to vitamin D deficiency**

Applying sunscreen may make you deficient in vitamin D, increasing your risk of muscle weakness and bone fractures.

"People are spending less time outside and, when they do go out, they are typically wearing sunscreen, which nullifies the body's ability to produce vitamin D," said Kim Pfothenauer, assistant professor at Torro University California.

"While we want people to protect themselves against skin cancer, there are healthy, moderate levels of unprotected sun exposure that can be

very helpful in boosting vitamin D," he said.

Chronic diseases like Type 2 Diabetes and those related to malabsorption, including kidney disease, Crohn's and celiac disease greatly inhibit the body's ability to metabolise vitamin D from food sources, researchers said.

Considered a hormone rather than a vitamin, vitamin D is produced when skin is exposed to sunlight. Vitamin D receptors are found in virtually every cell in the human body. As a result, it plays a wide role in the body's functions, including cell growth modulation, neuromuscular and immune function and inflammation reduction.

Increasing and maintaining healthy vitamin D levels can be as easy as spending 5-30 minutes in midday sun twice per week. "You do not need to go sunbathing at the beach to get the benefits. A simple walk with arms and legs exposed is enough for most people," Pfothenauer said.

**Get your share of D this summer**

The sunshine vitamin can be found in certain foods, by carefully exposing the skin to warming rays and from supplements, says Working nutritional therapist MONIQUE PARKER

**DURING** these summer months, you should be trying to get your share of the sunshine vitamin. I'm not sure many people have heard of that term, but I'm convinced most people have heard about vitamin D.

Unlike other vitamins, vitamin D is made in the skin from exposure to sunlight.

The ultraviolet B rays of the sun cause a reaction in the skin that ultimately produces vitamin D.

Vitamin D3 can also be found in certain foods such as fatty fish, liver, egg yolk, red meat, cheese, butter, cod liver oil, and fortified foods (foods with added vitamin D).

There is not only vitamin D3 (found in humans and animals), there is also vitamin D2, which is formed by UV radiation in plants and can be found in mushrooms for instance. For humans, vitamin D3 is better absorbed than vitamin D2.

Only about 10-20% of our vitamin D3 in-

actually suffering from vitamin D deficiency.

There are many factors involved in the low vitamin D status of people.

For example:

- Lack of sunshine;
- Not enough outdoor activities;
- Limited exposure to the sun;
- Dark skin.

But how long should we be in the sun and when?

And isn't too much sun causing skin cancer?

In about half the time it takes for your skin to get sunburned, you can make a good amount of vitamin D.

But you need to expose a bit more than just your face and arms. The more skin you expose, the more vitamin D you can make.

People with a very light skin only need about 15 minutes of decent sun exposure to obtain the vitamin D they need. However, people with a dark skin will need up to two hours to produce the same amount of vitamin D. This is because they have more melanin, the pigment that gives skin its colour. It protects against

that you can't cover. Avoid excessive sun exposure and particularly sunburns during childhood.

It is difficult to tell how much sun exposure you need to produce a certain amount of vitamin D. I would recommend making sure you expose yourself to the sun and that you regularly eat the foods that contain vitamin D. Sun exposure for 10 to 15 minutes to face, arms, hands or back, a couple of times a week, without sun cream.

Vitamin D supplements, all year around, are recommended for those people who are at risk of deficiency, such as the elderly or anyone who is housebound.

But supplementation is also recommended for everyone else from October until April, when there is less sun. If you're in doubt, get your vitamin D level checked.

How much vitamin D supplementation you need depends on your current vitamin D level. You can buy finger-prick blood spot tests that you can do yourself at home. However, if you're not up to this, you could get it checked by your GP.

According to the Institute of Functional Medicine in the USA, the optimal vitamin D level is 50-

**DAILY EXPRESS**

**DIVORCEE TOLD: GET A JOB AND STOP LIVING OFF YOUR EX**

**FREE INSIDE MOTORING SPECIAL YOUR ESSENTIAL 18 REG GUIDE**

**SUNSHINE VITAMIN CAN STOP DIABETES**

Boost your health just by going outside

**Children may lack Vitamin D**

Histopathology is a method of detecting vitamin D deficiency

**'Parents should not prevent them from playing outdoors'**

Anam Rizvi

ARU DHARI // Vitamin D deficiency

D, so I'm hoping that the patient. The doctor didn't about this."

Mr B Banna, who told his 10-year-old daughter to stop playing outdoors, said she should have had a blood test, he would also be checked for the vitamin D.

Dr Maysoun Kamil consultant in histology at Burjeel Hospital saw many children with vitamin D. Histopathology detects and diagnoses through analysis of tissue samples.

"Because of this he times children don't play," she said.

"Children are overprotected by their parents. Even when they are playing outdoors, it is covered, so they are not exposed to the sun."

**Kids should spend time outdoors to avoid Vitamin D deficiency**

**CHENNAI:** Vitamin D deficiency seems to be catching up with the younger generation at an alarming rate. As per a new study, 8 out of 10 youngsters under the age group of 20 are diagnosed with the condition in Chennai. Experts attribute the deficiency to poor exposure to sunlight, especially among the younger population.

Vitamin D, also known as sunshine vitamin, is produced when the skin is exposed to the sun. Hence the results of this study comes as a big surprise since Chennai is sunny for a major part of the year. This vitamin is important for the nourishment of the bones and in insufficient amounts can lead to rickets among children, osteomalacia and osteoporosis among adults.

The study conducted by Metropolitan Healthcare Ltd covered more than a lakh samples between 2012 and 2016 between the 0 to 80 years' age group. It was found that in the 10 to 20 years' age group, the deficiency was abnormally high at 88 per cent. The deficiency was also quite pronounced among women at 60 per cent, especially in the 40-50 age group, and among men at 65 per cent.

While talking to DT Next, Dr Naresh Shammugam, director of Paediatrics, Glen Eagles Global Health City, said that nowadays children barely spend time

The number of 'sunshine vitamin' deficiency cases have gone up significantly. A few simple precautions can help evade the shortage

**VITAL ENERGY**

**Top food items with Vitamin D**

- Fatty or oily fish, like tuna, mackerel, and salmon
- Foods fortified with vitamin D, like some dairy products, orange juice, soy milk, and cereals
- Mushrooms (Portobello Exposed to Sunlight)
- Egg yolks
- Cod liver oil
- Tofu
- Pork
- Beef liver
- Cheese

**AMONG THE TOTAL SAMPLES RECEIVED**

From women	From men
<ul style="list-style-type: none"> <li>■ Over 66% of the total samples showed insufficient Vitamin D with a major chunk in the age bracket of 40-50 years</li> <li>■ 21% of the total samples showed Vitamin D deficiency</li> <li>■ In the age groups of 0-10 years, almost 81% samples showed a lack of Vitamin D and in the age group of 10-20 years an alarmingly high 89.5% showed lack of Vitamin D</li> </ul>	<ul style="list-style-type: none"> <li>■ Almost 65% were detected with insufficient Vitamin D</li> <li>■ 18% of the total samples showed deficiency of Vitamin D</li> <li>■ In the 0-10 years age bracket, 80% samples showed lack of Vitamin D while in the age bracket of 10-20 years, over 85% showed lack of Vitamin D</li> </ul>

90 to 95% of the total samples showed deficiency of Vitamin D. The deficiency was also quite pronounced among women at 60 per cent, especially in the 40-50 age group, and among men at 65 per cent.

Dr Bhumika Srinivasan, consultant endocrinologist, said that the deficiency rates could be higher, but it is only diagnosed in those who have the symptoms. "If a woman has osteoporosis we check for the levels and try to correct it. It is definitely high at as much as

**Functions of Vitamin D**

- Build & maintain healthy bones and muscles
- Maintain proper blood levels of calcium & phosphorus
- Control cell division & specialization
- Modulate the immune system

# Who is at risk of Vitamin D deficiency?



**D**<sub>3</sub>  
vitamin

The  
**Sunshine**  
VITAMIN

Who is at risk of  
**Vit D Deficiency?**

**85%**  
lower-than-optimal  
vitamin D levels

**People With Limited Sun Exposure**

We need 10-15 minutes of UVB per day with 40% of our skin exposed.

**Overweight People**

Vitamin D is oil soluble & hides in fat.

**Pregnant Women**

Those with pregnancy-related high blood pressure or preeclampsia, have lower blood levels of D.

**The Elderly**

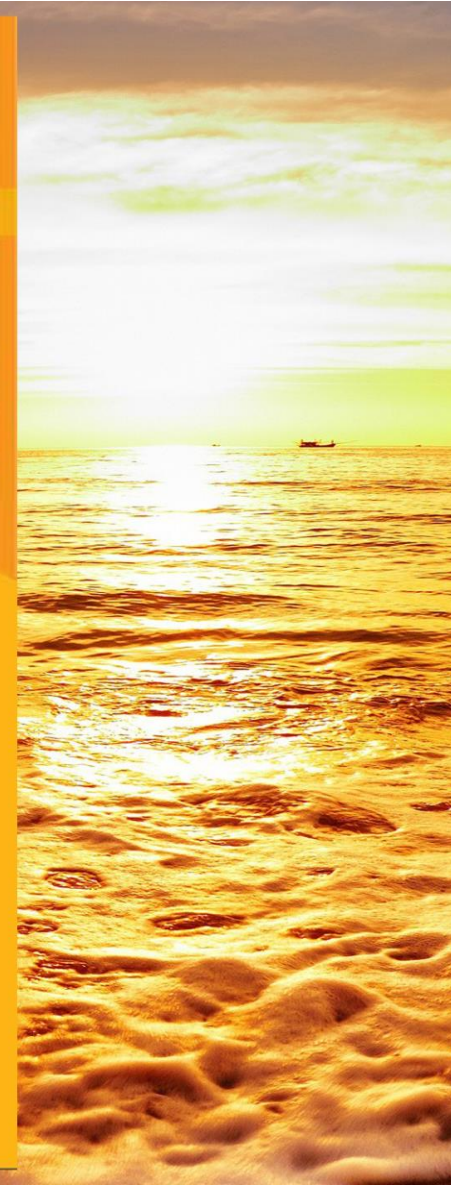
As you age, your skin loses the ability to generate Vitamin D.

**Dark-Skinned People**

The pigmentation of darker-skinned people blocks UVB radiation.

**Infants**

Human breast milk contains low levels of vitamin D.



# Kellogg's commitment to fortification



- **Continue to provide choice of nutrients and a variety of nutrient bundles across our portfolio**
- **Continue to monitor and respond to public health needs**

*Kellogg's*