

All you need to know about nutrition throughout the lifecycle



We all know that it is important to keep fit and healthy from a young age. We recognise that too many take-aways and not enough movement could land us in some deep water with not only our waistline, but our organ health too! Little do we know that as we progress through the lifecycle, our needs vary in terms of diet and exercise, not to mention the influence our genetics and environmental factors have on us. This blog contains all you need to know about what our bodies want from us at particular stages in our lifestyle...

Having a 'sweet tooth' really does exist...

We all use having a 'sweet tooth' as an excuse for that extra slice of cake from time to time. But the truth is, that our bodies do favour sweet foods to utilise the energy density. This is not a new craze. This tendency to reach for the biscuit tin is an evolutionary trait which continues to increase the world's population. As a result of this, it is important to ensure we are all knowledgeable on the specific nutrients we all need to guarantee life long health.



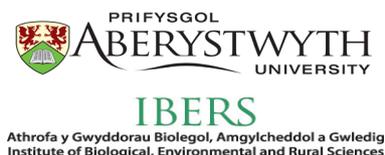
Fertility

As a woman, being undernourished can have a negative impact on your ability to reproduce. Not only that, undernourishment can lead to the development of fertility impacting diseases such as polycystic ovarian syndrome, endometriosis and uterine fibroids. Vitamin C, iron and arginine play an integral role in fertility.

Obesity can be an obstacle when trying to become pregnant. It is the biggest concern for women in western society and it can affect a woman's fertility greatly.

It's not just women that should be concerned with their health when trying to conceive. It is also extremely important that men are health conscious for the sake of their reproductive health (Mayoclinic 2019).

For both men and women, alcohol can be detrimental to successful conception. It has been shown that alcohol decreases sexual hormones in both genders. Furthermore, over consumption of alcohol in men can cause impotence and a reduction of blood testosterone concentrations (Drink Aware 2019).



Eating for two is an excuse we need to stop using

Growing another life is a very important task which should not be taken lightly. Fatigue, sickness and weight gain are all not so pleasant side effects which come with carrying a baby, but sadly to say, eating more is not necessary.



Whilst everyone assumes you should be doubling your food intake during pregnancy, the energy demand for the foetus only arises in the third trimester (28 weeks and beyond), with a small increase of up to 300 calories per day.

Nutrition is vital during pregnancy for the production of fatty acids and amino acids. Vitamins and minerals are also very important, therefore opting for the healthier option over foods which are high in sugar and fat will be beneficial for mother and baby in the long run.

Over consuming can leave you in what we call an overfed state. Being overweight during pregnancy can have a negative effect for both mother and baby.

Nutrition is important for mother and baby...



Getting the right nutrition during pregnancy is not only essential for the health of mother and baby, but also allows for optimal foetal development (Cetin 2016). As mentioned previously, consumption of an extra 300 calories per day in the last trimester is essential, consuming an extra 7g of protein.



However, nutrition shouldn't slip after giving birth. There should be an increase of protein consumption of 11g whilst lactating. Protein consumption is not the only thing you should be keeping an eye on either. During lactation, there is a need for increased calcium, phosphorus, magnesium, zinc, copper and selenium. Additionally, making sure water consumption and fibre consumption is increased is vital to avoid or ease constipation.



Babies aged four months and above have shown signs of accelerated fat cell generation which cannot be reversed if a child is over fed. This can leave the child at risk of childhood obesity. (Wahlquist 2015)

Deficiencies in essential vitamins and minerals can be corrected through a healthy and balanced diet. For example, a woman can become deficient in iron, which in turn can cause anaemia. Iron can be found in red meat, poultry, fish, beans and nuts which should be consumed to fix the deficiency.

Infancy

Infants grow in the blink of an eye, and due to their rapid growth, they need lots of vitamins and minerals to ensure healthy development. Rapid cell division which occurs during the growth stage requires protein, energy and minerals to aid DNA synthesis.



Breastmilk offers many more advantages over manufactured milk. There is an association between a reduced risk of obesity, allergies, high blood pressure and type one and two diabetes and breastmilk. Those who are breastfed have improved cognitive development (Agostoni 2019).

It's important to get the kids to eat their greens!

In childhood, boys tend to have increased lean muscle mass and lower proportion of body fat than girls. Energy requirements, again, vary but there is a need to keep an eye on sugar and saturated fat intake.

Obesity is an ongoing problem amongst children. Not only will it impact their health during an important development stage, but it may lead to habitual use of sugary and fatty foods in later life. These habits are associated with conditions such as coronary heart disease, stroke and high blood pressure. Over consumption of children's favourite snacks such as biscuits, fizzy drinks and confectionary leads to cognitive decline, obesity and insulin sensitivity (Johnson 2018).

To make sure children are not deficient in calcium, it is recommended that they consume two to three servings of milk and milk products for healthy bones and teeth. Some children do suffer from milk allergies, but they tend to diminish by the age of three (BNF 2019). Until the age of five, children are offered milk free of charge in England and Wales. We know children can be fussy, and if they turn their nose up at milk products, do not despair! Calcium can also be found in wholegrain cereals, beans, nuts, green vegetables or tofu.



So, what happens when children go to school? Schools are being encouraged to provide healthy and nutritious options for their students, emphasising the importance of healthy eating.

Media leaves our teenagers which some big choices to make...

During adolescence, growth is complete and sexually maturity begins. Lean body mass will increase between the age of 10 and 20 for both boys and girls. Social influences are apparent, with increased pressure on the 'ideal body image' which can affect a teenager's choice when it comes to nutritious foods. Peer pressure can also be a challenge, where individuals are likely to make a choice based on their peer's decision which may not always mean they are receiving the necessary vitamins and minerals. The need to become rebellious can also play a significant role, adopting new eating patterns to their usual diet.

Although the body is going through many changes, it's not necessary to increase the calorie intake significantly. If activity levels are increased, it is important to consume energy rich foods in correspondence, whilst still keeping the nutritious value of the food in mind.

Iron deficiencies can occur during this stage of the lifecycle. Iron rich foods are recommended such as meats, fish, beans and green vegetables. This deficiency can be caused by girls beginning to menstruate.

Don't forget about calcium! Although we're coming to the end of the growth stage, 45% of the adult skeletal bone mass is formed during adolescence so it's very important that calcium is present in the diet. With the rise of vegetarianism and veganism, is it important that young people are well informed on how to consume calcium from foods which aren't dairy products, such as lentils, chickpeas and beans.

Adults have to practice what they preach too!



As a parent, you often find yourself emphasising to your children how important it is to eat your fruit and vegetables yet find yourself too busy to make sure you're getting the right nutrition yourself. According to The Diet and Nutrition Survey (DNDS), males do very well when it comes to eating their greens but tend to slack getting their one portion of oily fish a week. It's recommended that men eat 140g of oily fish per week, as it contains long chain fatty acids which can help prevent heart disease, lower blood pressure and reduce inflammation (DNDS 2016).

On one hand, DNDS data suggested that women in the UK met the need for vitamins but on the other hand did not meet the requirements for all minerals, often falling short on iron. Oily fish is also good for women, as fish is high in omega 3 which maintains heart health and neurological health.

The survey also showed that women are over consuming double the amount of sugar intake per day due to fruit juices, cereals and confectionary.

Seniors

Although seniors don't require as much energy intake as those younger than themselves, it is still extremely important that nutrients are present in their diet. Lean body mass and slowing of the metabolic rate derives from the reduction in physical activity, loss of appetite or natural decline. Seniors face many challenges when trying to consume a healthy, well balanced diet.

This can be because of restrictions in being able to chew, inhibited digestion or malabsorption of nutrients (Kossionu 2018).

To stay strong and maintain muscle mass, it is important for seniors to meet their recommended protein intake. Again, calcium is also essential to a senior's diet, particularly women who are susceptible to osteoporosis due to decreasing bone density post menopause (Kelasi 2018).



What does this mean for the industry?

Education is key. Consumers need to be aware of the varying factors which they will come face to face with during their life cycle. Along with the SACN/UK Dietary recommendations, manufacturers must consider average nutrient intake collated. Food formulations must consider the consumer's lifelong health and food habits. Although a challenge, it will gain consumer loyalty and confidence in the long run.

Whether a product is nutritiously valuable or not is fast becoming a decider in the consumer's buyer decisions process, as our consumers become more and more health conscious. It has been identified that consumers are willing to pay more for high quality and highly nutritious goods (Cargill 2019).

Muscle building powders and recovery shakes now have a new demographic of consumers. These supplementary formulas are being consumed by alternative markets, especially seniors who are struggling to consume their recommended nutrition. Products which have been designed for the aging adult face real challenges on marketing to engage with the customer.

