



# The importance of the first 1000 days; Nutrition and Movement



By Louise Mercieca – The Health Kick

There's significant research to indicate that the first 1000 days (conception to age 2) is a critically important phase, indeed many claim that this time period is where the foundations of a child's development lie. This phase is the perfect chance to build a healthier future. There are many influences in this time that impact on the child's future health but one of upmost importance and close to my heart is that of formative nutrition and movement. Just how important are these during those 1000 days?



With food, it's not just the amount of food but very much about the type of food. When we feed a child, we are not simply filling them up, we are shaping them. Early food influences shape not only biological foundations but also our taste development, food behaviours and even food addictions.

With movement, early influences can shape habitual movement patterns or normalise sedentary behaviours. This is particularly important in today's obesogenic environment where inactivity can cause multiple health concerns. Childhood is a unique time where we can influence the biological strength of our skeleton and bone mass, via both nutrition and movement.





We often refer to 'building blocks' in nutrition and we can certainly use that term in relation to the first 1000 days, good nutrition during this time is the foundation for early cognitive abilities, motor skills and emotional development, this is all largely due to the incredibly impressive rapid growth and development of the human brain!

One thing that significantly supports a child's developing brain nutritionally, is a dietary intake of 'healthy fats' particularly EFAs (Essential Fatty Acids). Ensuring a mix of these fats is crucial for the development of the brain's structure, cognitive skills, and overall neurological function during the critical first 1000 days of life. Adequate intake of EFAs during this time is essential for establishing a strong foundation for lifelong brain health and cognitive performance.

### How to include healthy fats in the diet early on

To support early brain development, it's key to include these healthy fats and proteins - sticking to appropriate weaning 'age and stage' and ensuring safe eating practices:

- Avocado - easy to mash, versatile and a good source of monounsaturated fats which support early brain development.
- Introduce fish when able to as this is an excellent source of Omega 3 fatty acids, particularly Salmon and Mackerel. Great care must be taken to ensure fish is blended and free of bones.
- Eggs are a versatile food, a great source of Omega 3 fatty acids. Eggs are also high in the essential nutrient; Choline. Choline is important for brain development. The yolk needs to be fully cooked until a child is over 1 years old.
- Mashed up berries such as blueberries and strawberries support brain health as they are high in the antioxidant vitamin C.

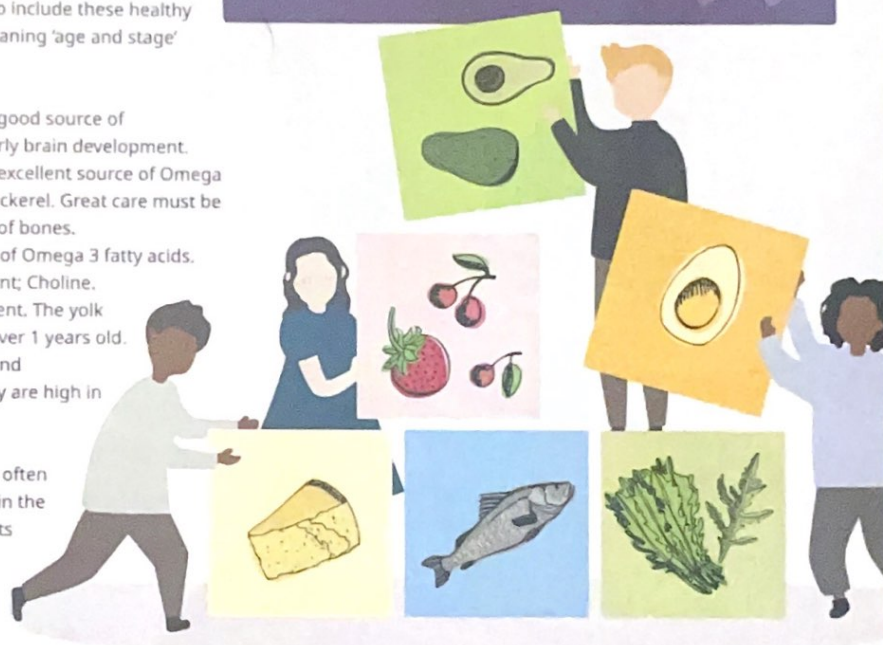
As with many other elements of nutrition it is often the vitamins and minerals present or lacking in the diet that tell the bigger picture. Many nutrients are involved in maintaining and developing our brain development, these include Zinc, Iodine, Vitamin C, B vitamins, Vitamin D and Magnesium. Food sources include:

- Zinc - unprocessed meat, lentils, beans and chickpeas, yogurt and cheese.
- Iodine - mashed salmon, cooked eggs, yogurt, cheese and milk.
- Vitamin C - lots of fruit and veggies are high in vitamin C. Mash, puree, steam a variety of colours to encourage broader eating and maximum nutritional intake.
- B vitamins - cooked eggs, yogurt, milk, cheese, fortified cereals (look out for sugar), lentils, beans, unprocessed meat, mushrooms.
- Vitamin D - safe exposure to sunlight, salmon, fortified foods (look out for sugar).
- Magnesium - lentils, pureed spinach, nut butters (once safe to introduce and not in a nursery setting due to cross-contamination).

### Early movement habits

Movement is essential for young children's development, particularly for building strong bones and establishing healthy habits. We can help to make movement fun and the norm, rather than focus on specific bursts of structured activity/exercise. Even very small children can find the term exercise intimidating and try to avoid (often influenced by an adults' personal experience of exercise). Our bodies are designed to move and movement in early childhood is crucial:

*"Osteoporosis has been called a paediatric disease with geriatric consequences"*



The above phrase has become widely adopted in the field of osteoporosis research and prevention. It appears in multiple authoritative sources on bone health and osteoporosis. The International Osteoporosis Foundation (IOF) use this in their Compendium of Osteoporosis, other sources are listed at the end of this article.

Movement stimulates bone growth, just like with muscles, bones get stronger with use. Children can strengthen their bones during early childhood via nutrition and movement. There's a special group of Vitamins and Minerals which support our bone development, these are similar to the nutrients needed to build and look after our teeth.





Calcium is the obvious mineral for building bones and teeth, but Calcium actually needs a number of supporting nutrients to enable it to work effectively.

- Phosphorus teams up with calcium to help build bones.
- Magnesium impacts the cells the body needs for bone growth and repair (osteoblasts and osteoclasts).
- Vitamin K activates bone-related proteins and regulates bone mineralisation.
- Potassium helps to decrease calcium losses from the body.

Nutrition is great for our bones but movement is equally important. Any kind of physical movement is great for early childhood bone development. The best way to build bone strength is via weight bearing activities such as simply playing, children being on their feet as much as possible and holding their own body-weight.



### More info on these subjects:

#### Short courses

<https://stan.store/healthkicklou/p/how-food-shapes-a-brain>  
<https://stan.store/healthkicklou/p/building-resilient-bones>

#### Podcasts

How Food Shapes Your Child - Building a Brain with Clare Stead  
Download URL  
<https://media.transistor.fm/82d5b091/822a6432.mp3>

How Food Shapes Your Child - Building Bones with Ben Healey, NHS Physio  
Download URL  
<https://media.transistor.fm/248decd9/6b6f5fbc.mp3>

Once a child can walk, walking is one of the best bone-building activities we can do:

- Walking is a weight-bearing activity, meaning it forces the bones to work against gravity.
- This type of exercise stimulates bone growth and increases bone density as the bones respond to the stress and impact of movement by becoming stronger and more resilient.
- Walking encourages the process of bone remodelling, where old bone tissue is replaced by new bone tissue.
- Walking helps increase Bone Mineral Density (BMD).
- Walking helps children develop better balance and coordination, which can reduce the risk of falls and related bone injuries.
- Walking strengthens the muscles surrounding the bones. Strong muscles provide better support and stability for the bones.

Instilling habits of walking regularly early on can make a huge difference to establishing both a strong skeletal frame and healthy movement habits.

### Conclusion

#### Shaping Future Health and Habits



Food does more than simply fill up a child! When we feed a child, we also are shaping their future relationship with food. Many adults with emotional eating issues can link this back to childhood. We can help babies and children shape healthier food habits and a lifelong healthy relationship with food, but to do this we need to appreciate the true significance of the foods we feed them. The same applies with movement, if we ensure that children, from a very early age move habitually rather than focus on small bursts of organised activity/exercise, moving will be more natural to them and not seen as a structured activity. Structured activity can be intimidating, even for young children who will then seek to avoid this and become more sedentary.

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Podcast interview - How Food Shapes Your Child - Marnie Wills on early movement habits

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#### You may also be interested in:

Food and Nutrition for Childcare Settings guidance - giving children the best start in life, *smalltalk*, (October 2023), pg 10 - 1