



# Bone Builders

From milk to sardines, find out what's needed to keep your little one's bones healthy and strong.

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**W**hen it comes to building strong bones, one instantly thinks of reaching for that milk carton. But milk isn't the only thing that gives you strong bones. It's what is in it that really counts.

For adults aged 19-50 years, a daily intake of 1000mg of calcium is needed for healthy and strong bone development. The little ones on the other hand need between 300 to 500mg of calcium a day.

The Health Promotion Board, Singapore states that the calcium requirements for children in Singapore are as follows:

- 0 to 6 months: 300mg/day (breastfed), 400mg/day (formula-fed);
- 6 to 12 months: 400mg/day
- 1 to 3 years: 500mg/day

While that may seem much less as compared to what an adult needs, consultant paediatrician from Thomson Paediatric Centre, Dr Anita Menon stresses its importance. "Calcium is very important in babies' and children's diets. Not only is it the most abundant mineral in the body, it is also of vital importance in bone growth and teeth development as well as for proper functioning of nerves and muscles."

Dr Eugene Han, a paediatrician from SBCC Baby & Child Clinic goes on to say, "In addition, 10mcg/day of Vitamin D (cholecalciferol) is required for children zero to three years of age." As another integral factor to building your bone's health, not having sufficient Vitamin D can lead to brittle bones.

### When there isn't Enough

Not getting the recommended daily intake of calcium doesn't just affect your child's bone development. Insufficient calcium in a child's diet can lead to various conditions and

the symptoms and signs will vary with children of different age groups. "Babies with very low calcium levels may have poor feeding, vomiting and abdominal distension as well as lethargy. They may also have seizures or twitching and cramping of muscles," explains Dr Menon.

Rickets in infants and children may also be another area of concern with very low calcium intake. "Rickets is a medical condition when the bones are softened causing severe bowing of the legs, poor growth, and sometimes muscle pain and weakness," says Liong Suet Mei, senior dietician at National University Hospital.

The effects of a lack of calcium may not be shown immediately. Without sufficient bone mass, osteoporosis may be a problem later on in life. And this is especially so for women.

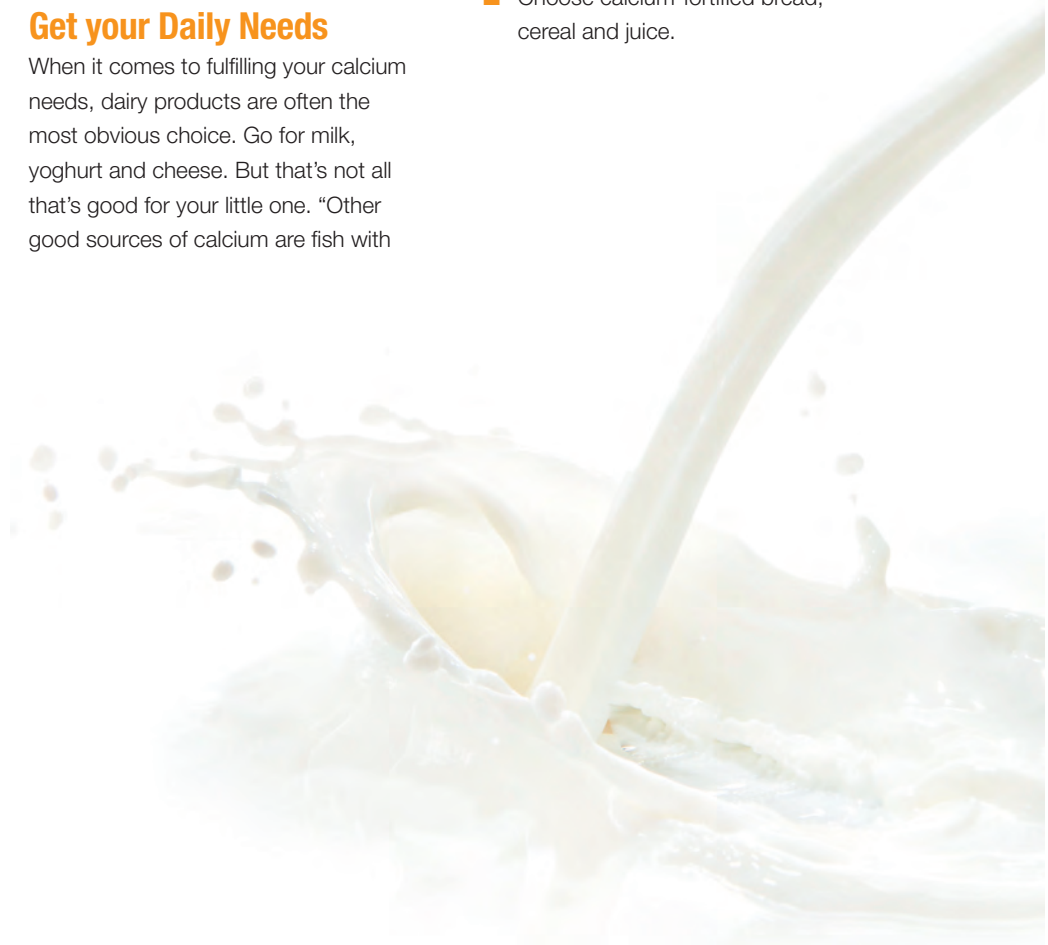
### Get your Daily Needs

When it comes to fulfilling your calcium needs, dairy products are often the most obvious choice. Go for milk, yoghurt and cheese. But that's not all that's good for your little one. "Other good sources of calcium are fish with

edible bones such as sardines and ikan bilis, tofu, lentils and green leafy vegetables," says Dr Han. Try and add calcium-fortified foods such as bread, biscuits, juice and soybean milk to the menu as well.

But that is usually easier said than done. With all that there is to tempt the little ones, it might be a tad difficult to get them to consume foods rich in calcium. Dr Han shares some ways to ensure that your child still receives sufficient calcium:

- Use milk instead of water when making cereals, drinks and soups.
- Choose evaporated milk, which has twice the calcium content of regular milk, in cooking.
- Add yoghurt to fruit salads.
- Add milk powder to pancake batter, sauces, and smoothies.
- Add cheese to vegetables, sauces, and mashed potatoes.
- Choose calcium-fortified bread, cereal and juice.





Snack time would be another perfect time to get some calcium into your child's diet. "Choose calcium-rich foods as snacks. For instance, instead of going for sweetened soft drinks, choose a dairy drink for the child or have a cheese sandwich instead of a kaya sandwich," recommends Liong.

And if you have a child who is lactose intolerant, don't fret. Your child can still get the calcium he needs by including the non-dairy calcium-rich foods mentioned above in his diet. You'll be glad to know that often, kids who are lactose intolerant may still be able to stomach small amounts of milk, cheese and yoghurt. Says Dr Han, "Parents can gradually introduce these in small amounts to determine the degree of their child's lactose intolerance. Yoghurt, in particular, is preferred as it contains bacteria that break down lactose. Milk should be given in smaller portions throughout the day to minimise symptoms. Aged cheese contains less lactose, so it is also preferred."

## Milk Matters

Wondering if your child is getting enough calcium? To ensure he is, Liong states that children aged seven months to two years require 750ml of milk daily while three-year-old children need 500ml a day.

While the American Academy of Pediatrics (AAP) recommends breastfeeding as the sole source of nutrition for your baby for the first six months, formula milk can be used if there is insufficient breast milk. But keep your baby away from regular cow's or goat's milk until he turns a year old. It doesn't have the right amounts of nutrients needed for your growing baby.

But once your child is ready, continue to let milk be an important part of his diet. "Children aged one to

## INTRODUCING CHEESE AND YOGHURT

When it comes to other dairy choices such as cheese and yoghurt, you don't have to wait till your little one turns a year old. In fact, Dr Menon suggests introducing pasteurized yoghurt and cheese to babies between six to eight months of age.

But why are cheese and yoghurt okay for babies under one while cow's milk isn't? According to Liong, it is not just an issue about allergy but about nutrient adequacy. "If all of a child's milk feeds are cow's milk, they may not be getting enough nutrients such as iron and vitamin C as these exist in lower concentrations in cow's milk compared to those in breast or formula milk. It may even cause iron-deficiency anaemia in some babies." Also, cow's milk isn't as easily digestible as breast or formula milk.

Adding these dairy choices doesn't just mean your little one gets to try new things. Just like cheese, yoghurt is rich in calcium, helps in digestion and good for strong bones and teeth. They are also good sources of protein. And for the tots, Liong suggests adding cheese to sandwiches, pasta or wraps, while yoghurt can be added to fruits or cereals for that calcium and protein boost.



two years may be given either age-appropriate formula or whole milk. After the age of two years, low-fat milk may be considered," advises Dr Han.

But if you have a picky eater to deal with or one who refuses to drink his milk, calcium supplements might be just the thing you need to ensure your child gets his daily dose of calcium. "Calcium supplements are usually necessary when there is insufficient dietary calcium or there is poor absorption of calcium for various

reasons and there are symptoms and signs of calcium deficiency as well as low blood levels of calcium," says Dr Menon. Before you head out to stock up on calcium supplements, be sure to consult your paediatrician.

But remember, always ensure that the dairy products you're feeding your child are pasteurized and cultured for safety. "Always introduce new foods one type at a time and look for signs of allergy such as rash; eyelid or lip swelling," advises Dr Han. ■