

News & Events



5 Ways to Support Healthy Bone Development

Lauren Burns / 21/02/2021 / Blog, Nutrition

What is a skeleton's favourite instrument?
A trom-bone.

All jokes aside, building and maintaining good bone health is important. Throughout childhood, adolescence and early adulthood, minerals are incorporated into your bones to create peak bone mass. This helps to prevent fractures and fragile bones later in life.

Bone remodelling is something that is a continuous process, where old bone is broken down and new bone is made. Peak bone mass is reached around the age of 30, but before then the body produces new bone faster than it breaks down old bone. Once peak bone mass is reached, the body continues to make new bone, just not at the same rate. This is why it is important to ensure we have optimal levels of calcium during childhood and into adulthood.

Healthy diet and lifestyle habits can assist in building strong bones.

Below I have listed 5 ways to support healthy bone development along with some suggested family recipes.

The Recommended Daily Intake for dietary calcium changes throughout the lifespan:

Calcium RDI

- Children aged 1-3 – 500mg
- Children aged 4-18 – 1,300mg
- Adults – 1,000mg
- Older women – 1,200mg

5 ways to support healthy bone development

Regular Weight-Bearing Exercise

Weight-bearing or high intensity exercise is one of the best types of activity to promote bone health and the formation of new bone growth. For children this includes activities such as: walking, running/jogging, dancing, skipping, jumping. Fun and unstructured play are always the best ways to get children participating. Playgrounds are wonderful places to encourage children to move, simply climbing up a slide or standing on one foot are great examples of appropriate weight-bearing activities for children.

Incorporate Calcium Rich Foods in the Diet

Making sure children have sufficient calcium intake is important to protect and maintain their bone health. Calcium is an essential mineral. Did you know 99% of the body's calcium is found in the bones and teeth? New bone cells are constantly forming, so daily calcium consumption is best to maintain bone structure and strength. A variety of sources throughout the day is best and will optimise absorption. These include food such as:

- green leafy vegetables
- eggs
- dairy: yoghurt, milk, feta cheese
- sardines & salmon (with edible bones)
- nut & seed butters (almonds are one of the highest)
- beans & lentils
- tofu

Eat Lots of Vegetables

Vegetables are fabulous for bone health. Vegetables which are high in vitamin C (such as green leafy vegetables, parsley, broccoli, yellow and red peppers, citrus fruits) directly assist in the development and maintenance of bone tissues and have a positive and protective effect on bone health. High vegetable intake is associated with bone density, and a high consumption of green and yellow vegetables in particular are linked to an increase in bone mineralisation during childhood along with bone mass maintenance in young adults.

Protein

Consuming enough dietary protein is important for protecting bone health. Bones are largely made up of protein, and protein is involved in good bone formation. This is not to be confused with a 'high protein diet' but a diet lacking in adequate protein will affect bone health. Some good dietary sources of protein are:

- eggs
- lentils
- chicken
- beef
- quinoa
- almonds
- fish
- yoghurt
- vegetables such as broccoli and brussels sprouts

Vitamin D and Vitamin K

Vitamin D is integral to your body's ability to absorb calcium. Maintain good vitamin D levels through outdoor activities (being sun safe of course!). Vitamin K2 is also an important part of bone formation and assists in preventing a loss of calcium from bones.

Good food sources of vitamin D include:

- oily fish (mackerel, salmon, sardines)
- egg yolks

Dietary sources of vitamin K2 can be found in small amounts in meat, liver and eggs. It is also found in fermented foods such as sauerkraut, kimchi and natto miso.

Recipes

Popcorn Broccoli

A fabulous dish packed with flavour.

Serves 4 (as a side dish)

INGREDIENTS

- 500 grams broccoli florets (approx 2 medium heads of broccoli), including any leaves
- 1 tablespoon nutritional yeast
- ¼ teaspoon smoked paprika (optional)
- 1/2 teaspoon sea salt
- freshly ground black pepper
- 2-3 tablespoons olive oil
- 1 tablespoon apple cider vinegar (or white wine vinegar)

METHOD

Preheat oven to 200° C.

Prepare a lined baking sheet. Put the broccoli florets on the sheet.

In a medium sized bowl, combine all ingredients except the broccoli. Mix to form a smooth paste. Add broccoli and mix with your hands to make sure all broccoli florets are well covered. Place seasoned broccoli on the baking tray, making sure none are overlapping.

Roast the broccoli for 25-30 minutes, turning halfway. Florets should be cooked through and a little charred in parts. Serve immediately as a snack or alongside a main meal.

Parsley Pesto (Vit C + nuts/seeds)

Makes 600mL.

Add pesto to pasta or roast tomatoes, or use it on bruschetta or to top roast vegetables. This recipe contains butter, which gives a delicious richness of flavour.

- 2 generous tablespoons walnuts (or macadamia or almonds) For a nut free pesto you can use sunflower seeds.
- 2 cups fresh flat leaf parsley leaves, washed and dried
- 2 cloves garlic
- 1 teaspoon salt
- 125 ml good-quality olive oil
- 60 g butter at room temperature
- 1/2 cup coarsely grated parmesan

Dry-roast the nuts/seeds in a frying pan or under the grill until golden brown. Cool. Using a food processor or blender, finely chop the basil. Add the garlic, salt, olive oil and butter and blend well. Add the parmesan and nuts and blend roughly. Use immediately or store in an airtight container in the fridge or freezer.

Lauren Burns is Niño ELA's Nutritional Ambassador, an Olympic gold medallist and a leading nutritionist who shares our passion for building healthy eating habits for life.

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