

Iron alternatives for vegetarian children

Iron is needed for growth, brain health, fighting sickness and carrying oxygen around the body. Because they are growing so much, children have high iron needs. This puts them at high risk of iron deficiency if their iron needs aren't met through their diet.

In vegetarian and vegan diets, special care is needed to make sure iron intake is being met. Iron found in plant foods is called *non-haem iron*. While iron in animal foods is *haem iron*. *Non-haem iron* is poorly absorbed by the body compared to haem iron. This makes it harder to meet daily iron requirements. It's important that a mix of iron-rich plant foods are offered and eaten regularly.

Iron needs during life:

- When a child is 6 months, the iron stores they built during their mothers pregnancy drop. This is why it's important to focus on offering plenty of iron-rich foods as first solids from 6 months of age.
- Breast milk contains little iron. Iron deficiency can occur if too much breastmilk is offered and not supplemented with iron-rich foods between 6 months to 2 years.
- Cow and most calcium fortified-plant milks are not a good source of iron and shouldn't be introduced before 12 months. Children drinking lots of cow or calcium-fortified soy milk after 12 months are at risk of iron deficiency. This is because it replaces iron-rich foods and reduces iron absorption. Children should have no more than 500mL of any type of milk each day so they can eat a balanced diet.
- People at risk of iron deficiency: fussy or picky eaters, small amounts/no meat eaten, children eating vegetarian/vegan diets and people with gastrointestinal issues. If your child has had diarrhoea and/or vomiting for long periods, this can affect iron absorption. It's important to speak to your doctor if this is the case.
- After 12 months, the recommended daily target of iron changes depending on a child's age and gender:

Age Group	Recommended Daily Intake
1 - 3 yrs	9mg
4 - 8 yrs	10mg
9 - 13 yrs	8mg

GRAINS	SERVING SIZE	IRON PER SERVE
 Fortified cereal	30g or 2 wheat biscuits	3.2 - 4.2mg
 Wholemeal pasta	1/2 cup	1.2mg
 Oats	30g	0.6mg
 Wholegrain bread	1 slice	0.4mg
 Brown rice	1/2 cup	0.4mg
LEGUMES, NUTS & SEEDS		
 Tofu	100g	3mg
 Kidney beans	1/2 cup	1.6mg
 Lentils (canned)	1/2 cup	1.6mg
 Cashews & almonds	20 nuts	1 - 1.5mg
 Chickpeas	1/2 cup	1.1mg
VEGETABLES & FRUIT		
 Spinach	1 cup (cooked)	1.2mg
 Dried apricots	5 pieces	1mg
 Broccoli	1 cup	0.9mg

How can I help my child get more iron?

Iron absorption in plant foods is complex. Many factors can affect the absorption of plant-based iron foods:

- Cook your plant-based iron foods to increase their iron availability, particularly legumes and green leafy vegetables
- Where possible, avoid having high calcium foods (e.g. dairy) with plant-based iron sources, as calcium lowers the absorption of iron
- Speak to your doctor to determine if any of your child's medications or supplements affect their iron absorption
- Serve plant-based iron foods with vitamin C foods, as these increase the absorption of iron (e.g. serve an orange with a meal):

IRON-RICH MEALS		VITAMIN C FOODS
 Tofu stir fry	+	 Add broccoli or kale
 Wholegrain pasta with chickpeas	+	 Add spinach or capsicum
 Chilli with kidney beans & brown rice	+	 Serve with fresh lime or lemon

When is supplementation necessary?

If you're worried your child isn't getting enough iron, speak to your doctor and dietitian. Don't start supplementation without consulting your doctor, as high levels of iron can be very harmful.

TIPS:

1. Start early! Give iron-rich solid foods from 6 months. Prioritise these foods in your child's diet as they grow. Children's needs are very high in their first two years. Make sure you include plant-based iron sources daily. This includes: iron-fortified cereals, cooked chickpeas or lentils.
2. Choose wholegrains over refined, white grains. Wholegrains have much more iron per serve!
3. Add plant-based proteins like legumes, beans or tofu to meals, as these contain iron.

