

Dietary recommendations for plant-based adolescents



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Adolescence is a crucial period when important changes occur on many levels:

- Significant increase in height
- Peak bone mass is reached in late adolescence
- Sexual maturation

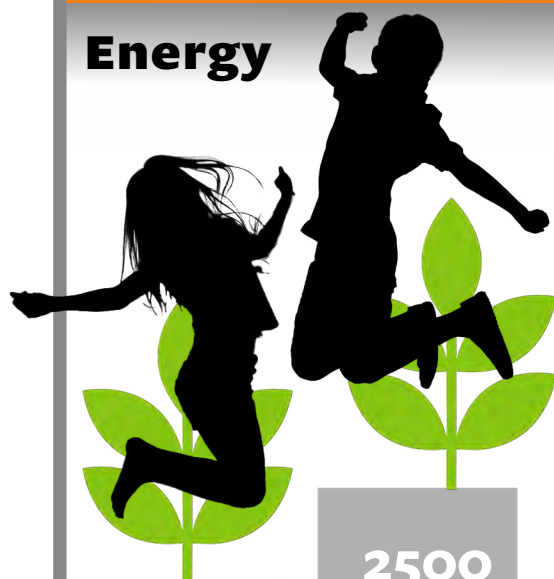


The brain undergoes a period of rapid development and refinement, largely influenced by the action of sex hormones, but also by personal and social experiences.

This rapid growth and development requires adequate nutrition.

Nutritional needs

Energy



2000
Kcal

2500
Kcal

Girls

Boys

From age 11, estimated energy needs match adults: **2000 Kcal/day** for females and **2500 Kcal/day** for males, a **15%** and **30%** increase respectively, from earlier childhood.

Very active adolescents may need more.

Adolescents should include **energy-rich foods** such as **whole grains** (bread, pasta, rice, couscous, quinoa), potatoes and sweet potatoes, legumes, peanuts, and nuts and seeds in their daily diet.



It is important to eat nutritious snacks, which not only provide sufficient calories, but also protein, minerals, vitamins and fibre.



Protein

Protein needs also increase, but as long as the diet provides enough calories and includes a good variety of foods, **meeting these higher requirements should not be a problem.**

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Vitamins and Minerals

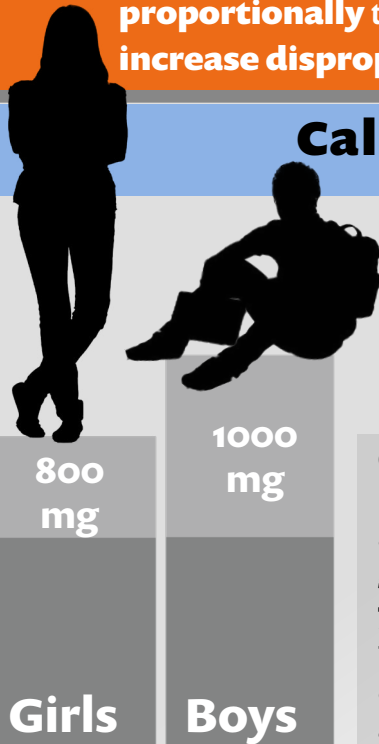
Although the requirements for most **vitamins and minerals increase proportionally** to the **increase in calories**, the needs for **some nutrients increase disproportionately**, and may be **difficult to meet in some cases**:

Calcium

Two glasses of fortified plant milk (preferably soya or pea) provide **500-600 mg of calcium** (60-75% of requirements in girls; 50-60% of requirements in boys).

Other good sources include fortified soya yogurt, calcium-set tofu, kale, broccoli, rocket, almonds, tahini, and chia seeds, which should be **included regularly** in the diet.

Calcium requirements nearly **double** as adolescence begins, from **550 mg/day** at ages **7-10**, to **1000 mg/day** for boys and **800 mg/day** for girls aged 11 and up.



Iron

From the first menstruation, girls need nearly **twice as much iron: 14.8 mg/day** versus **8.7 mg** previously.

This can be challenging for lean girls with lower calorie needs and those with **heavy menstrual bleeding**, who may need iron supplements.

Teen girls who play **regular sports** are at **higher risk** for iron deficiency and might need **annual blood tests** to check levels.

In boys, the increase in iron requirements is less marked: from **8.7 mg** to **11.3 mg**, and is **easily met** by a typical well-balanced plant-based diet.



Iron rich + Vitamin C rich

Beans and lentils, seeds, dark leafy greens, dried fruit, oats, and some fortified foods are all great sources of iron.



It is helpful if these are consumed alongside sources of **vitamin C**, such as citrus fruits, red peppers, broccoli and strawberries, to **enhance absorption**.



Learn more about iron in our [factsheet](#).

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Vitamin D

Vitamin D is essential for absorbing calcium in the intestine.

Official recommendations are the same at all ages: **10 µg/day**, but needs are highly variable depending on **skin type, sun exposure, intake of fortified foods**, and other circumstances.

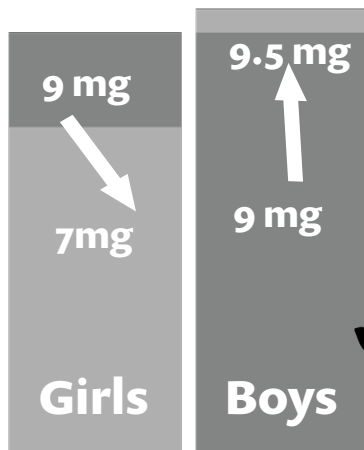
(Everyone over 1 year is advised to take **10 mcg (400 IU)** of vitamin D daily from **October to March**).



Zinc

Zinc is vital for growth, sexual maturation, and reproductive function.

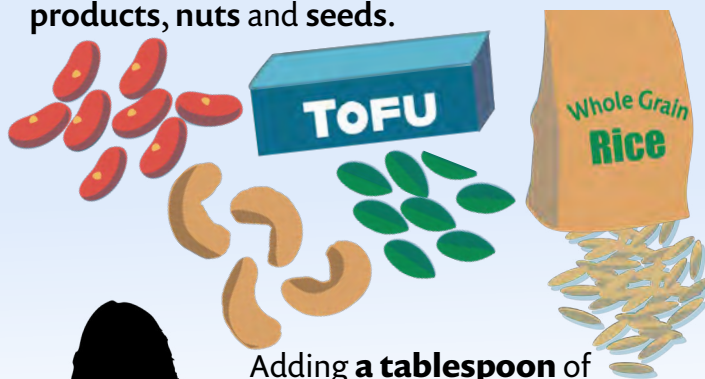
This is why girls' needs are highest between **11-14 years: 9 mg/day**, and then drop to **7 mg/day**.



Boys aged **11-14** need **9 mg/day**, increasing to **9.5 mg/day** beyond that age.



To meet these needs **daily**, it is important to include **whole grains, legumes, soya products, nuts and seeds**.



Adding a **tablespoon** of **nutritional yeast** to meals can also contribute greatly to **daily** requirements.



Omega-3 fatty acids

Essential for the long-term health of the heart and brain, it is important to include daily sources of omega-3s.



This can be done by adding a **tablespoon** of **chia seeds** or **milled flaxseeds (linseeds)**, or **two tablespoons** of **hemp seeds** or **six walnut halves** to breakfasts, smoothies or salads.



There is currently a **lack of evidence** to support use of **omega-3 supplements** at this age, but this can be discussed further with a **health care professional** if concerned.

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Key foods for plant-based teenagers

Adolescents who were already plant-based do not need to make significant changes in their diet when entering adolescence.

Mealtimes and snacks should be structured as at any other age, but adolescents may be hungrier and should eat according to their appetite.

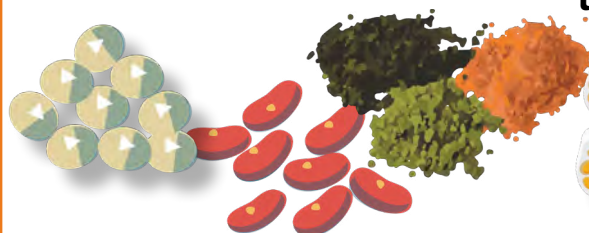
Plant milk, yoghurt

Fortified plant milks and yoghurts provide most of the **calcium** requirements, and if they are based on **soya** or **pea**, good amounts of **protein** and other nutrients as well.

Aim for 2-3 portions / day (one portion = 1 glass of milk, or 2 yoghurts).



Beans, legumes etc. Chickpeas, beans, lentils, other legumes, tofu and tempeh, and peanuts.



Ideally one portion in each meal and snack.

They provide **protein**, **complex carbohydrate** and **fibre**, **B vitamins** and **minerals**, including **calcium**, **iron** and **zinc**.



Soya foods

There are some **fears** and **misconceptions** around **soya foods**, but they are an **excellent source** of **protein**, **fibre**, **polyunsaturated (healthy) fats**, **B vitamins** and various minerals.

Soya is **not** a hormone disrupter, has **no negative** effects on reproductive health, and has known **health benefits** such as **improved bone strength** and **cancer risk reduction**.



In fact, childhood exposure of as little as **one portion a day** is thought to be **protective** for **reducing future breast and prostate cancer risk**. Soya foods can be an important source of **key nutrients** in adolescence and **should be included without fear**.



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Nuts and seeds

Nuts and **seeds** are a concentrated **source of energy** (unsaturated fats) and also provide **protein, vitamins** and **minerals**.

One to two handfuls per day, depending on physical characteristics and activity level.



Olive oil, nut butters and **avocados** are also great sources of healthy fats.

Fruit and vegetables

At least 5 portions per day. Teenagers who do not like vegetables much can eat more fruit instead.



Grains and potatoes

Grains (rice, couscous, pasta, bread...) and **potatoes**.

As much as needed to satisfy appetite, provided the minimum amounts of legumes, fruit and vegetables have been already included.



Supplements

Vitamin B12

10-25 micrograms daily or **2,000 micrograms once a week.**

Iodine

From age 15, iodine needs are 140 micrograms/day, the same as adults. Some plant milks are fortified with iodine; check labels to see if one or two glasses cover at least 75% of the daily requirement. If not, then it is important to take a supplement containing iodine.

Vitamin D3

Minimum 10 µg/day, but some adolescents, especially those with darker skin or with low sunlight exposure, may need more.

VEG 1, a chewable **multivitamin** by The Vegan Society, provides sufficient **vitamin B12, vitamin D, iodine**, and **selenium** for teenagers. From age 12, the recommended dose is **one tablet daily.**



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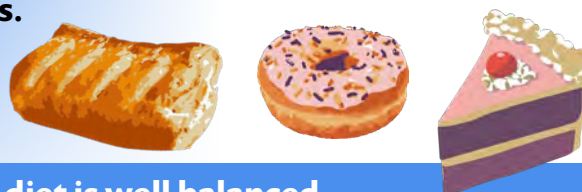
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Fast foods for vegan teenagers

Social life is important for the mental and emotional health of adolescents.



Vegan teenagers need **plant-based options** when **eating out with friends**, including fun foods like **cakes, pastries, and vegan sausage rolls**.



Occasional fast food is fine if their overall diet is well balanced.

Plant-based meats do vary in nutrients according to type and brand.

Options like **soya, pea, seitan, or mycoprotein** (mushrooms) are **protein-rich** and sometimes **fortified with iron or B12**. And **unlike meat**, they all contain some **fibre**. **Some** do have added **saturated fat and salt**, so it's wise to **compare labels**.



But remember, animal meats are **naturally high in saturated fat and other harmful compounds**, and **processed meats** are **very high in salt and known to cause cancer**, so **plant-based meats** are still a **healthier alternative**.

Disordered eating

The onset of disordered eating beliefs and behaviors occurs most commonly in the teenage years.

While people with certain eating disorders such as **anorexia nervosa** **may** be more likely to **choose a vegetarian or vegan diet** to **restrict calorie intake**, a **vegan diet** is **not inherently restrictive**. **Dieting** is the **biggest risk factor** for developing an eating disorder.

Visit the [Beat UK website](https://www.beat-uk.org/) for more information.

For teenagers at **low body weights** or who are **especially active**, disorders of **low energy availability** known as **relative energy deficiency in sport (RED-S)** can be a concern. The increased prevalence of **RED-S** among **plant-based eaters** may also be **unintentional** and due to the **selection of low energy-dense, high fibre plant foods**.

Common signs and symptoms include **feeling fatigued, significant weight loss, irregular/absent periods, mood issues, difficulty concentrating** and **frequent/increased injury and illness**.

Specialist medical advice can be helpful in this situation.

Our [factsheet](#) on **gaining weight healthfully** may be useful for some teenagers.

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BREAKFAST IDEAS



Nut butter on toasted bagel with a banana



Mashed avocado on toast with a glass of fortified soya drink



Overnight oats (made with soya drink), fruit and nut butter

Scrambled tofu with chopped tomatoes, mushrooms and wholemeal toast



Porridge (made with soya drink), topped with fruit, seeds and nuts



MEAL IDEAS (lunch or dinner)



Veggie chilli with rice and guacamole



Lentil Bolognese and spaghetti



Lentil and black bean burrito



Hummus and falafel wrap with cucumber, tomato and red onion



Vegetable stir-fry with tofu and peanut sauce

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SNACKS



Greek style soya yoghurt with banana and walnuts



Pitta bread and carrot sticks with hummus



1-2 slices of wholemeal toast with peanut butter



Glass of fortified plant based drink (preferably soya/pea based) with a piece of fruit



Smoothies (preferably homemade)



Handful of nuts with a piece of fruit

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