

Nuts

Healthy snacking in a nutshell



European Snacks Association

Fact Sheet

Background

Around the world consumers love to snack and many look to nuts to deliver great taste and nutrition. Nowadays there is a large variety of nuts for consumers to choose from. Peanuts are the most widely consumed, but are in fact legumes that grow under the ground (sometimes referred to as groundnuts). However, tree nuts are becoming increasingly popular and many different types are readily available.

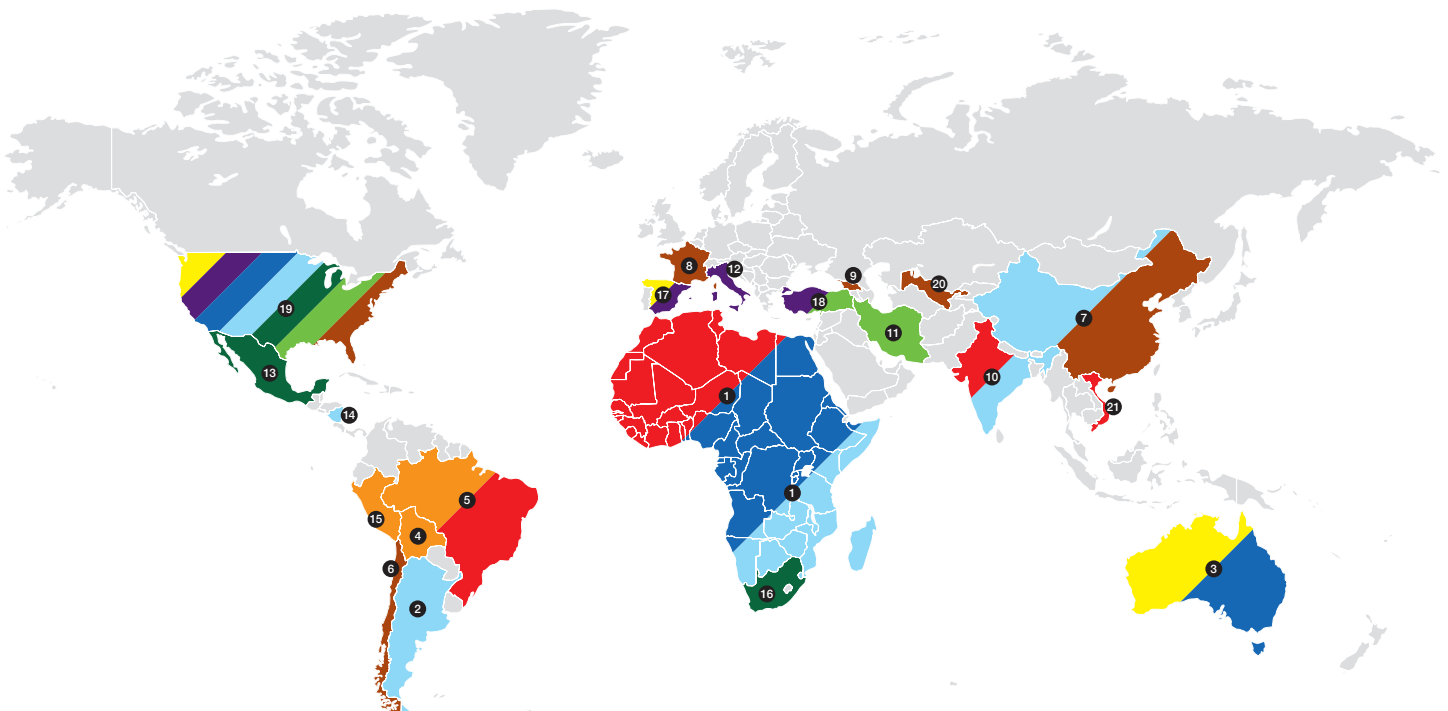
In Europe the most commonly consumed snack nuts are peanuts, almonds, cashews, walnuts, hazelnuts, pistachios, pecans, Brazil nuts and macadamias.

Nuts are produced throughout the world. Argentina, Australia, Brazil, China, India, Iran, South Africa, Turkey and the USA are all major nut origins.



ESA members pursue a multi-origin sustainable sourcing strategy in growing regions around the globe, carefully assessing quality, food safety, cost and availability.

Major Nut Origins



Almonds	Brazil nuts	Cashew nuts	Hazelnuts	Macadamias	Peanuts	Pecans	Pistachios	Walnuts
<ul style="list-style-type: none"> 3 Australia 17 Spain 19 USA 	<ul style="list-style-type: none"> 4 Bolivia 5 Brazil 15 Peru 	<ul style="list-style-type: none"> 1 Africa 5 Brazil 10 India 21 Vietnam 	<ul style="list-style-type: none"> 12 Italy 17 Spain 18 Turkey 19 USA 	<ul style="list-style-type: none"> 1 Africa 3 Australia 19 USA 	<ul style="list-style-type: none"> 1 Africa 2 Argentina 7 China 10 India 14 Nicaragua 19 USA 	<ul style="list-style-type: none"> 13 Mexico 16 South Africa 19 USA 	<ul style="list-style-type: none"> 11 Iran 18 Turkey 19 USA 	<ul style="list-style-type: none"> 6 Chile 7 China 8 France 9 Georgia 19 USA 20 Uzbekistan

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Nuts – The facts on nutrition

It is widely recognised that regular consumption of nuts can form part of a healthy, balanced diet.

Nuts are an important source of nutrients, including dietary fiber, copper, iron, magnesium, and potassium. They also contain many important minerals and vitamins, but not all nuts are the same. Each nut type has its own benefits and varying levels of nutrients.

By eating a mixture of nuts, you are sure to get a variety of important vitamins and minerals, not to mention enjoying a wider range of great flavours and textures.

Almonds are a 'high source' of dietary fibre and vitamin E, the latter which contributes to the protection of cells from oxidative stress. They are also high in riboflavin (vitamin B2), which contributes to the maintenance of normal skin and vision, and calcium, which helps maintain normal bones and teeth.



Brazil nuts are a high source of dietary fibre and several minerals, including magnesium and selenium. Magnesium contributes to normal nerve and muscle function, the maintenance of normal bone and teeth, and the reduction of tiredness and fatigue. One Brazil nut provides almost twice as much selenium as the Recommended Dietary Intakes (RDIs) or Nutrient Reference Values (NRVs¹). Selenium contributes to the maintenance of normal hair and nails. In addition, selenium contributes to the normal function of the immune system and thyroid, as well as the protection of cells from oxidative stress.

Cashews are high in zinc, copper and iron. Zinc, amongst its many functions, contributes to the maintenance of normal skin, hair and nails. Copper contributes to the normal function of the immune and nervous system, while iron contributes to the normal functioning of the immune system.

Macadamia nuts

are high in monounsaturated fat, and when compared to other nuts, have the highest level of monounsaturated fat per 100g serving. There is scientifically substantiated dietetic advice stating that replacing saturated fats with unsaturated fats in the diet contributes to the maintenance of normal blood cholesterol levels.



Peanuts are high in protein and contain the most protein out of all nuts on a 100g basis (see table on following page). Protein helps to maintain normal bone and contributes to the growth and maintenance of muscle mass.

Peanuts also are a high source of niacin (vitamin B3), which contributes to normal energy-yielding metabolism and normal functioning of the nervous system. In addition, peanuts are high in folate (vitamin B9), which contributes to normal psychological function, normal functioning of the immune system and to the reduction of tiredness and fatigue. Peanuts also contain significant amounts of other minerals that contribute to different functions in the body, including zinc, copper, iron and magnesium.



Pistachios are high in potassium and vitamin B6. Potassium contributes to normal muscular and neurological function, and also helps to maintain normal blood pressure. Vitamin B6 contributes to normal red blood cell formation, and to the regulation of hormonal activity.

Walnuts are high in polyunsaturated fat and contribute to the improvement of the elasticity of blood vessels.²

In view of the growing body of research, a number of governmental agencies and health organisations around the world have revised their dietary advice to consumers and emphasized the importance of reducing the amount of saturated fat in their diets.

Around 70 to 90% of the fat in nuts comes from unsaturated fat (specifically, monounsaturated and polyunsaturated fat – see table on following page). Replacing saturated fats with unsaturated fats in the diet contributes to the maintenance of normal blood cholesterol levels.³ Walnuts are high in polyunsaturated fat, while almonds, cashews, hazelnuts, macadamia nuts, peanuts, pecans, and pistachios are high in monounsaturated fat.

All the health claims related to the nutrients occurring in nuts referred to in the text have recently been authorised and are listed in the Annex to the European Commission Regulation (EU) No 432/2012⁴ establishing a list of permitted health claims made on foods, other than those referring to the reduction of disease risk and to children's development and health.

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TYPICAL NUTRIENT VALUES FOR NUTS

**NRVs based on a 100g portion	Almond	Brazil	Cashew	Hazelnut	Macadamia	Peanut	Pecan	Pistachio	Walnut
Calories	575	656	574	628	716	585	691	567	654
Carbohydrates (g)	21.7	12.3	32.7	16.7	13.4	21.5	13.9	29.4	13.7
Dietary Fibre* (g)	HIGH SOURCE 12.2	HIGH SOURCE 7.5	SOURCE OF 3.0	HIGH SOURCE 9.7	HIGH SOURCE 8.0	HIGH SOURCE 8.0	HIGH SOURCE 9.6	HIGH SOURCE 9.9	HIGH SOURCE 6.7
Total Fat (g)	49.4	66.4	46.4	60.8	76.1	49.7	72.0	44.8	65.2
Saturated Fat (g)	3.73	15.1	9.16	4.46	11.9	6.89	6.18	5.46	6.13
Monounsaturated Fat (g)	HIGH SOURCE 30.9	HIGH SOURCE 24.6	HIGH SOURCE 27.3	HIGH SOURCE 45.7	HIGH SOURCE 59.3	HIGH SOURCE 24.6	HIGH SOURCE 40.8	HIGH SOURCE 23.7	8.93
Polyunsaturated Fat (g)	12.1	20.6	7.84	7.92	1.50	15.7	21.6	13.5	HIGH SOURCE 47.2
Protein (g)	SOURCE OF 21.2	14.3	15.3	15.0	7.79	SOURCE OF 23.7	9.17	SOURCE OF 21.0	15.23
Calcium (mg) **80mg	HIGH SOURCE 264	SOURCE OF 160	45	114	70	54	70	107	98
Copper (mg) **mg	HIGH SOURCE 0.996	HIGH SOURCE 1.74	HIGH SOURCE 2.22	HIGH SOURCE 1.73	HIGH SOURCE 0.57	HIGH SOURCE 0.67	HIGH SOURCE 1.20	HIGH SOURCE 1.29	HIGH SOURCE 1.59
Iron (mg) **14mg	SOURCE OF 3.72	SOURCE OF 2.43	HIGH SOURCE 6.00	HIGH SOURCE 4.70	SOURCE OF 2.65	SOURCE OF 2.26	SOURCE OF 2.53	SOURCE OF 4.03	SOURCE OF 2.91
Magnesium (mg) **375mg	HIGH SOURCE 268	HIGH SOURCE 376	HIGH SOURCE 260	HIGH SOURCE 163	HIGH SOURCE 118	HIGH SOURCE 176	HIGH SOURCE 121	SOURCE OF 109	HIGH SOURCE 158
Potassium (mg) **2000mg	HIGH SOURCE 705	HIGH SOURCE 659	HIGH SOURCE 565	HIGH SOURCE 680	HIGH SOURCE 363	HIGH SOURCE 658	HIGH SOURCE 410	HIGH SOURCE 1007	SOURCE OF 441
Sodium (mg)	Salt-free / No added sodium 1	Salt-free / No added sodium 3	Very low sodium / No added sodium 16	Salt-free / No added sodium 0	Salt-free / No added sodium 4	Very low sodium / No added sodium 6	Salt-free / No added sodium 0	Very low sodium / No added sodium 6	Salt-free / No added sodium 2
Selenium (µg) **55µg	2.5	HIGH SOURCE 1917	SOURCE OF 11.7	2.4	SOURCE OF 11.7	7.5	3.8	SOURCE OF 10	4.9
Zinc (mg) **10mg	HIGH SOURCE 3.08	HIGH SOURCE 4.06	HIGH SOURCE 5.60	SOURCE OF 2.45	1.29	HIGH SOURCE 3.31	HIGH SOURCE 4.53	SOURCE OF 2.34	HIGH SOURCE 3.09
Vitamin B2 (Riboflavin) (mg) **1.4mg	HIGH SOURCE 1.01	0.04	0.06	0.11	0.09	0.10	0.13	SOURCE OF 0.23	0.15
Vitamin B3 (Niacin) (mg) **16mg	SOURCE OF 3.39	0.30	1.40	1.80	2.27	HIGH SOURCE 13.5	1.17	1.37	1.13
Vitamin B6 (mg) **1.4mg	0.14	0.10	SOURCE OF 0.26	HIGH SOURCE 0.56	SOURCE OF 0.36	SOURCE OF 0.26	SOURCE OF 0.21	HIGH SOURCE 1.12	HIGH SOURCE 0.54
Vitamin B9 (Folate) (µg) ** 200µg	SOURCE OF 50	22	HIGH SOURCE 69	HIGH SOURCE 113	10	HIGH SOURCE 145	22	SOURCE OF 51	HIGH SOURCE 98
Vitamin E (alphatocopherol) (mg) **12mg	HIGH SOURCE 26.2	HIGH SOURCE 5.73	0.92	HIGH SOURCE 15.0	0.57	HIGH SOURCE 6.93	1.4	SOURCE OF 2.42	0.70

Source: U.S. Department of Agriculture, Agricultural Research Service 2011. USDA National Nutrient Database for Standard Reference, Release 25. Nutrient Data Laboratory Home Page, www.ars.usda.gov/ba/bhnr/nd/. The U.S. database has been used as it contains the most comprehensive and up to date information. Almonds, hazelnuts, pecans and walnuts are unroasted (raw). Cashews, macadamias, pistachios and peanuts (all types) are dry roasted without salt added. Brazil nuts are dried, unblanched.

* Dietary fibre – there is no harmonised legal definition of fibre and there are no authorised health claims with regard to fibre contained in nuts specifically. Recently the Commission issued a guidance document with regard to methods of analysis for determination of the fibre content declared on a label. The fibre content calculations included in the table are based on the USDA data and may differ compared to results of fibre calculations based on the Commission guidance.

**The NRVs for vitamins and minerals are specified in Regulation 1169/2011 on the provision of food information to consumers, which comes into effect from 13 December 2014.

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Explanations in relation to table content:

The **bold number** indicates the highest value. Shaded red areas show where the nutrient content of the nut is sufficient to classify it as HIGH SOURCE (more than 30% of the Recommended Daily Allowances (RDAs)⁵ as defined in the Annex of Commission Directive 2008/100/EC) or blue areas a SOURCE OF (more than 15% of RDA) of that nutrient.

A **'source of protein'** and **'high protein'** claim can be made if protein accounts for at least 12% and 20% of the energy value of the food, respectively.

A **'high in monounsaturated fat'** and **'high in polyunsaturated fat'** claim can be made if at least 45% of fatty acids in the product is derived from monounsaturated and polyunsaturated fat, respectively, and that at least 20% of energy of the product is derived from monounsaturated and polyunsaturated fat, respectively.

A **'source of fibre'** can be made when a product contains at least 3 of fibre per 100g, or at least 1.5g of fibre per 100kcal.

A **'high in fibre'** claim can be made when a product contains at least 6g of fibre per 100g, or at least 3g of fibre per 100kcal.

A **'salt-free/sodium-free'** claim may be used if a product contains no more than 0.005g of sodium, or the equivalent value for salt, per 100g or 100ml.

A **'very low sodium/salt'** claim may be used if a product contains no more than 0.04g of sodium, or the equivalent value for salt, per 100g or 100ml.

A **'no added sodium/salt'** claim can be made when a product does not contain any added sodium/salt or any other ingredient containing added sodium/salt, and the product contains no more than 0.12g sodium, or the equivalent value for salt, per 100g or 100ml, as per Commission Regulation (EU) No 1047/2012.

Nuts as part of a balanced diet

While there are a number of authorised claims on nutrients occurring in nuts, research in many countries continues to demonstrate the benefits of nut consumption – this will likely result in more authorised nut-specific health claims in the future.

The recent conclusions from the global key research centres indicate that:

- In an epidemiological study conducted in the U.S., consumers of peanuts, peanut butter, and tree nuts were shown to have lower body mass index (BMI) and waist circumferences than non-consumers. Nut consumers also had lower blood pressure and lower levels of LDL-cholesterol compared to non-consumers.⁶
- Children increased the amount and types of vegetables consumed when dipped in peanut butter.⁷
- Nuts are part of the "Mediterranean diet" healthy eating pattern along with fruit, vegetables, olive oil, whole grains, lean meat, fish and wine.⁸
- A handful of nuts (~30 g) contain around 180 to 200kcal – which is in line with the amount of "discretionary calories" recommended for snacking in between main meals.⁹



- Contrary to popular opinion, salted snack nuts are not high in salt - the salt is on the surface, so it is tasted immediately. A 30g serving of roasted and salted peanuts, pistachios, cashews or mixed nuts all contain less than 0.4g of salt.¹⁰ The daily recommended intake of salt is 6g.¹¹

The savoury snacks industry is responding to consumer demand for healthier, flavourful snack choices, offering a wide variety of options: roasted with or without any added fat, and a multitude of seasonings. Something to meet everyone's taste and preference!

References

- ¹ The NRVs for selenium is 55µg/100g, and one Brazil nut (average weight of 5g) provides 95µg/100g
- ² This beneficial effect is obtained with a daily intake of 30g of walnuts.
- ³ This claim applies to foods that are high in unsaturated fatty acids listed in the Annex to Regulation (EC) No 1924/2006, as per Commission Regulation (EU) No 432/2012.
- ⁴ Official Journal of the European Union nr L 136 Volume 55: <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:136:0001:0040:EN:PDF>
- ⁵ The RDAs for vitamins and minerals are specified in Commission Directive 2008/100/EC of 28 October 2008 amending Council Directive 90/496/EEC on nutrition labelling for foodstuffs as regards recommended daily allowances, energy conversion factors and definitions. As of 13 December 2014, this is when the Regulation (EU) No 1169/2011 enters into effect RDAs will be replaced with NRVs.
- ⁶ Nut Consumption Is Associated with Decreased Health Risk Factors for Cardiovascular Disease and Metabolic Syndrome in U.S. Adults: NHANES 1999-2004, *Journal of the American College of Nutrition*, Vol 30, No. 6, 5002-510 (2011)
- ⁷ Increasing Vegetable Intake in Mexican-American Youth: A Randomised Controlled Trial, *Journal of Human Nutrition and Dietetics*, 2011
- ⁸ Consensus Statement of the 2000 International Conference on the Mediterranean Diet: Dietary Fat, the glycaemic products are seen as 'good' Mediterranean Diet and Lifelong Good Health, London.
- ⁹ McCance & Widdowson's *The Composition of Foods* (6th ed). Royal Society of Chemistry, London 2002
- ¹⁰ McCance & Widdowson's *The Composition of Foods* (6th ed). Royal Society of Chemistry, London: 2002
- ¹¹ The Reference Intake for salt for adults in the EU is 6g according to Regulation (EU) No 1169/2011)