

Energy is the 'power' that makes the body work. Every cell of our bodies needs energy to function.

What is energy made of?

- Scientists measure energy in tiny units called 'joules'. A joule is the amount of energy used to move an object one metre in one second. We can understand this more easily by knowing it is about the amount of energy we need to lift an apple one metre into the air.
- Energy in food is measured in kilojoules (one kilojoule is 1000 joules) and megajoules (one megajoule is 1000 kilojoules). The term 'calorie' is also sometimes used to talk about the amount of energy in food. 1 calorie (Kcal) is roughly equivalent to 4 kilojoules (kJ).
- Countries using the metric system use kilojoules but others, for example the United States, use calories.

NUTRIENT	AVERAGE QUANTITY	
	PER SERVING	PER 100ml
ENERGY	223kJ	179kJ
PROTEIN	<19	<19
FAT	<19	<19
- SATURATED FAT	09	09
CARBOHYDRATE	B.1g	10.59
~ SUGARS	B.lg	10.59
DIETARY FIBRE	<19	<19
SODIUM	5.9mg	4.7mg
POTASSIUM	138mg	110mg
VITAMIN C	44mg	35mg
ONE SERVING RECOMMENDED DI ORANGE & MAN RECONSTITUTED	G PROVIDES 100% ETARY INTAKE OF GO JUST JUICE C FRUIT JUICE (AF	OF THE F VITAMIN C ONTAINS; PPLE (69%),

How much energy do we need?

• People need different amounts of energy, depending on age, size, and activity levels.

We need extra energy to:

- Grow fast.
- Recover from a serious illness.
- Be very active.
- Keep warm if it's very cold.



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How do we get energy?

- We get energy from the food that we eat.
- Food is broken down in the digestive system and nutrients travel to where they are needed in the blood.
- We get most of our energy from carbohydrates, protein, and fat.



How do our bodies use energy from food?

- Our body uses most of the energy we get just to stay alive! 40 to 70 percent of the energy we take in (depending on our age and size) is needed to keep our bodies working; so that our hearts beat, we keep breathing, and we can digest food to keep giving us energy. This is called our 'Basal Metabolic Rate'.
- 'Dietary Thermogenesis' is the energy we use to digest food, and transport and store nutrients for later use. This takes about 10 percent of our energy, every day.
- We also need energy from food to move and be active. Physical activity can use between 20 and 50 percent of our energy every day, depending on how active we are.

References

Kilojoules and calories (18 August 2014). State Government of Victoria Retrieved from http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Kilojoules_and_calories-explained 29 August 2014

Collins essential English dictionary: Plus language in action supplement. (2003). Glasgow: Collins.

Work, Energy and Power. (n.d.). Retrieved from http://www.wou.edu/las/physci/GS361/EnergyBasics/ EnergyBasics.htm September 3, 2014.

Merriam-Webster dictionary (n.d.). Retrieved from http://www.merriam-webster.com/dictionary/newton



September 3, 2014.

What is a Joule? (n.d.). Retrieved from http://www.universetoday.com/61490/what-is-a-joule/ September 3, 2014.

Ministry of Health. (2012). New Zealand Food and Nutrition Guidelines for Healthy Children and Young People (Aged 2-18 years). A background paper. Wellington, NZ. Ministry of Health.

New Zealand Nutrition Foundation (2014). Nutrition. Retrieved from http://www.nutritionfoundation.org.nz/ nutrition-facts/Nutrients/energy September 4, 2014.

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Reviewed by Leanne Young, MPH, NZ Registered Dietitian, 14 January 2015 LET NZ 3March 2015

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