

**Hi Elementals!**

**For the “if you do nothing else” page I would like you to have a scan through a question set that I completed for a course that is on going at the moment. It was in response to a section on sugars and the risk they imposed on the body. This links into the whole food diet idea and also for the refrain you will get from me constantly, that to be healthy you need to look at and then put back on the shelf, refined and processed foods.**

**Please don't be terrified at the stuff below, I like you am not a monk(sorry if you are one! No offense meant) so yes I enjoy the occasional indulgence but you can do that if you understand what is going on and why treats should be a treat, not a mainstay.**

**Any how have a read (forgive any syntax errors!) and if you have questions email me on the site email address or through the contact form. I'll upload more in this area as the site develops**

**Cheers**

**Ady**

**Q1. What is the nutritional status of sugar?**

Sugar is a carbohydrate. In the context of this section most people would consider sugar to be refined sugar from a commercial source such as beet sugar or cane sugar.

**Q2. List eight indications of the presence of sugar on food labels.**

If the label states:

**Carbohydrate** but does not give a separate figure for sugar<sup>1</sup> or any of the following<sup>2</sup>:

- Agave Nectar
- Barley Malt Syrup
- Corn sweetener
- Corn syrup, or corn syrup solids
- Dehydrated Cane Juice
- Dextrin
- Dextrose
- Fructose
- Fruit juice concentrate
- Glucose
- High-fructose corn syrup
- Honey
- Invert sugar
- Lactose
- Maltodextrin
- Malt syrup
- Maltose
- Maple syrup
- Molasses
- Raw sugar

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<sup>1</sup> <http://www.bbc.co.uk/news/magazine-14045305>

<sup>2</sup> <http://lowcarbdiets.about.com/od/whattoeat/a/sugars.htm>

- Rice Syrup
- Saccharose
- Sorghum or sorghum syrup
- Sucrose
- Syrup
- Treacle
- Turbinado Sugar
- Xylose

### Q3. Find five products containing sugar in your kitchen and list them.

Food labelling via Sainsburys on line. [Sugars in blue](#)

#### ITEM 1

### Fox's Chunkie Half Coated Chocolate Cookies 175g

Item code: 6463229

#### Description

Suitable for vegetarians

Half coated milk chocolate chunk cookie.

When we opened our bakehouse in Victorian Yorkshire we were infatuated with quality and delighted in giving pleasure to our customers. Surprisingly little has changed in over 150 years.

Each biscuit contains Calories 131 7%, Sugar 10.2g 11%, Fat 6.6g 9%, Saturates 3.7g 19%, Salt 0.14g 2% of an adult's guideline daily amount

#### Ingredients

Wheatflour, Milk Chocolate Chunks (22%), Milk Chocolate (16%), Vegetable Oil, [Sugar](#), Oatmeal, [Partially Inverted Refiners Syrup](#), [Desiccated Coconut](#), [Glucose Syrup](#), [Molasses](#), Raising Agents: Ammonium Bicarbonate, Sodium Bicarbonate, Disodium Diphosphate, Salt, Flavouring, Emulsifier: Soya Lecithin, Milk Chocolate Chunks contain: [Sugar](#), Cocoa Butter, Cocoa Mass, Dried Whole Milk, Dried Whey, Emulsifier: Soya Lecithin, Milk Chocolate contains: [Sugar](#), Cocoa Butter, Dried Whole Milk, Cocoa Mass, Dried Whey, Dried Skimmed Milk, Emulsifier: Soya Lecithin.

#### Dietary Information

Suitable for Vegetarians

Contains Gluten

Contains Oats

Contains Wheat

Contains Milk

May Contain Nuts

Contains Soya\Soybeans

#### Nutrition

	Per 100g	Per Biscuit
Energy kJ	2129	548
kcal (Calories)	509	131
Protein	5.9g	1.5g
Carbohydrate	62.0g	16.0g
Of which sugars	39.7g	10.2g
Fat	25.8g	6.6g
Of which saturates	14.4g	3.7g
Fibre	2.6g	0.7g
Sodium*	0.22g	0.06g
*Equivalent as salt	0.54g	0.14g

#### ITEM 2

### Sainsbury's Freefrom Soft Brown Seeded Bread 400g

Item code: 7416957

#### Description

Gluten, wheat and dairy free brown seeded loaf

Made with sunflower seeds, linseeds, millet grain and poppy seeds

#### Dietary Information

Contains egg

Not suitable for nut allergy sufferers due to the methods used in the manufacture of this product.

**Ingredients**

Water, Tapioca Starch, Rice Flour: Rice Flour; Potato Starch, Sunflower Oil, Sunflower Seeds (4%), Linseed (3%), Yeast, Psyllium Husk Powder, Millet Grain (2%), Humectant: Glycerine; **Black Treacle**, Stabiliser: Hydroxypropyl Methyl Cellulose; Dried Egg White, Poppy Seed (1.5%), Maize Flour, Salt, Maize Starch, Rice Starch, **Caramelised Sugar Syrup**, Preservative: Calcium Propionate.

**Nutrition**

	Per 100g	Per slice	% based on GDA for adult
Energy	1262kJ	361kJ	-
	302kcal	86kcal	4.3%
Protein	3.4g	1.0g	2.2%
Carbohydrate	39.8g	11.4g	5.0%
Total Sugars	2.1g	0.6g	0.7%
Starch	37.7g	10.8g	-
Fat	12.5g	3.6g	5.1%
Saturates	1.4g	0.4g	2.0%
Fibre	8.0g	2.3g	9.6%
Salt	0.91g	0.26g	4.3%
Sodium	0.37g	0.10g	4.2%

**ITEM 3****Homepride Roast Chicken Casserole 500g**

Item code: 6782344

**Description**

A hearty sauce for Roast Chicken Casserole with carrot, leek, parsley, sage and thyme.

ENRICHED OXO FLAVOUR.

Each 1/4 jar serving contains Calories 46 2%, Sugars 3.8g 4%, Fat 0.3g <1%, Saturates 0.1g <1%, Salt 1.1g 18% of an adult's guideline daily amount.

**Ingredients**

Water, Carrot (6%), Onion (4%), Corn Starch, Leek (3.5%), **Sugar**, Celery (1.5%), Yeast Extract, Potato Starch, Salt, Natural Flavourings (contain Wheat, Soya), Chicken Extract, Acidity Regulator (Lactic Acid), Flavouring (contains Egg), Parsley, Thyme, Sage, Vegetable Extracts, **Caramelised Sugar**, Rosemary, **Barley Malt Extract**, Black Pepper, **Maltodextrin**.

**Dietary Information**

Contains Celery  
 Contains Barley  
 Contains Gluten  
 Contains Wheat  
 Contains Eggs  
 Contains Soya\Soybeans  
 Free From Artificial Colours  
 Free From Artificial Flavours

**Nutrition**

	per 100g as sold	per 1/4 jar serving (125g)
Energy	154kJ/36kcal	195kJ/46kcal
Protein	0.8g	1.0g
Carbohydrate	7.8g	9.8g
of which Sugars	3.0g	3.8g
Fat	0.2g	0.3g
of which Saturates	0.1g	0.1g
Fibre	0.4g	0.5g
Sodium	0.34g	0.42g
Salt Equivalent	0.85g	1.05g

**ITEM 4****New York Bakery Co. Onion Bagels x5**

Item code: 7510474

**Description**

Low in fat

Suitable for vegetarians & vegans

Onion bagels.

Stonebaked for an authentic New York taste the way bagels should be. Period.

1 serving = 1 bagel (90g)

**Ingredients**

Wheat Flour, Water, Onion (2%), Sugar, Yeast, Salt, Wheat Gluten, Palm Oil, Poppy Seed, Rapeseed Oil, Preservative (Calcium Propionate), Malted Barley Flour, Flour Treatment Agent (Ascorbic Acid), Maize Grits.

**Dietary Information**

Suitable for Vegans

Suitable for Vegetarians

Contains Gluten

Contains Wheat

May Contain Sesame Seeds

**Nutrition**

**per 100g contains:**

Energy	1093kJ/258kcal
Protein	9g
Carbohydrate	49.6g
(of which sugars	5.9g)
Fat	2.0g
(of which saturates	0.7g)
Fibre	2.9g
Sodium	0.4g
Salt	1.0g

**ITEM 5****Doritos Dip Hot Salsa 300g**

Item code: 6315007

**Description**

Hot Tomato Dipping Sauce.

No artificial colours or flavours.

Less than 1% fat.

**Ingredients**

Tomatoes (Chopped Tomatoes, Tomato Puree from Concentrate) (69%), Onion, Peppers (11%), Jalapeno Peppers (3%), Spirit Vinegar, Salt, Modified Starch, Sugar, Garlic Puree, Spices.

**Dietary Information**

Free From Artificial Colours

Free From Artificial Flavours

**Nutrition**

**per 100g**

**per 40g**

	<b>per 100g</b>	<b>per 40g</b>
Energy	138kJ/33kcal	55kJ/13kcal
Protein	1.1g	0.4g
Carbohydrate	6.4g	2.6g
of which sugars	4.0g	1.6g
Fat	0.1g	Trace
of which saturates	<0.1g	Trace
Fibre	0.9g	0.4g
Sodium*	0.56g	0.22g

\*Equivalent as Salt

**Q4. Give five sugar cutting tips.**

1. Post dinner suck a single boiled sweet to get over the sweet craving many have after eating.
2. When there is a craving for sweet things drink a glass of water as a distraction and to rehydrate.
3. Rinse mouth with mouth wash to reset taste buds after eating or clean teeth.
4. Drink cinnamon based tea as it has a refreshing effect on palate.
5. Use sugar free mixers with alcoholic drinks.

**Q5. Explain why sugar levels should be reduced.**

Someone should reduce their sugar levels when they can not identify where sugars are coming from and is linked to a lifestyle choice. They should reduce their sugar intake if it is being arbitrarily added by them or by a processor. It is likely that this nutrient lacking sugar will take up calorific value that could be used to better benefit for the body. One example would be adding sugar to cereals when to get the same effect a banana could be added. Sugar would still be present but so would all the nutrients and fibre that come from the fruit.

Basically get away from refined food especially sugar. Once that artificial energy source is taken out of the equation the nutritionist can then better distribute the calorific and nutritional value to food that is beneficial to the client and so hopefully reduce the potential damage that refined sugar does for no practical benefit to the client.

**Q6. Choose and write about one disease associated with sugar.**

When starting to research this question my assumption was that obesity and various forms of diabetes with maybe tooth decay was the ball park for this question. Then I discovered this rather terrifying list from *By Nancy Appleton, Ph.D*, [www.nancyappleton.com](http://www.nancyappleton.com), which I have broken into columns for easier (just!) viewing:

- |  |  |   |
|--|--|---|
| <ol style="list-style-type: none"> <li>1. Sugar can suppress the immune system.</li> <li>2. Sugar upsets the mineral relationships in the body.</li> <li>3. Sugar can cause hyperactivity, anxiety, difficulty concentrating, and crankiness in children.</li> <li>4. Sugar can produce a significant rise in triglycerides.</li> <li>5. Sugar contributes to the reduction in defense against bacterial infection (infectious diseases).</li> <li>6. Sugar causes a loss of tissue elasticity and function, the more sugar you eat the more elasticity and function you lose.</li> <li>7. Sugar reduces high density lipoproteins.</li> <li>8. Sugar leads to chromium deficiency.</li> <li>9. Sugar leads to cancer of the ovaries.</li> <li>10. Sugar can increase fasting levels of glucose.</li> <li>11. Sugar causes copper deficiency.</li> <li>12. Sugar interferes with absorption of calcium and magnesium.</li> <li>13. Sugar can weaken eyesight.</li> <li>14. Sugar raises the level of a neurotransmitters: dopamine, serotonin, and norepinephrine.</li> <li>15. Sugar can cause hypoglycemia.</li> <li>16. Sugar can produce an acidic digestive tract.</li> <li>17. Sugar can cause a rapid rise of adrenaline levels in children.</li> <li>18. Sugar malabsorption is frequent in</li> </ol> | <ol style="list-style-type: none"> <li>patients with functional bowel disease.</li> <li>19. Sugar can cause premature aging.</li> <li>20. Sugar can lead to alcoholism.</li> <li>21. Sugar can cause tooth decay.</li> <li>22. Sugar contributes to obesity</li> <li>23. High intake of sugar increases the risk of Crohn's disease, and ulcerative colitis.</li> <li>24. Sugar can cause changes frequently found in person with gastric or duodenal ulcers.</li> <li>25. Sugar can cause arthritis.</li> <li>26. Sugar can cause asthma.</li> <li>27. Sugar greatly assists the uncontrolled growth of Candida Albicans (yeast infections).</li> <li>28. Sugar can cause gallstones.</li> <li>29. Sugar can cause heart disease.</li> <li>30. Sugar can cause appendicitis.</li> <li>31. Sugar can cause multiple sclerosis.</li> <li>32. Sugar can cause hemorrhoids.</li> <li>33. Sugar can cause varicose veins.</li> <li>34. Sugar can elevate glucose and insulin responses in oral contraceptive users.</li> <li>35. Sugar can lead to periodontal disease.</li> <li>36. Sugar can contribute to osteoporosis.</li> <li>37. Sugar contributes to saliva acidity.</li> <li>38. Sugar can cause a decrease in insulin sensitivity.</li> <li>39. Sugar can lower the amount of Vitamin E (alpha-Tocopherol in the blood).</li> <li>40. Sugar can decrease growth hormone.</li> <li>41. Sugar can increase cholesterol.</li> </ol> | <ol style="list-style-type: none"> <li>42. Sugar can increase the systolic blood pressure.</li> <li>43. Sugar can cause drowsiness and decreased activity in children.</li> <li>44. High sugar intake increases advanced glycation end products (AGEs)(Sugar bound non-enzymatically to protein)</li> <li>45. Sugar can interfere with the absorption of protein.</li> <li>46. Sugar causes food allergies.</li> <li>47. Sugar can contribute to diabetes.</li> <li>48. Sugar can cause toxemia during pregnancy.</li> <li>49. Sugar can contribute to eczema in children.</li> <li>50. Sugar can cause cardiovascular disease.</li> <li>51. Sugar can impair the structure of DNA</li> <li>52. Sugar can change the structure of protein.</li> <li>53. Sugar can make our skin age by changing the structure of collagen.</li> <li>54. Sugar can cause cataracts.</li> <li>55. Sugar can cause emphysema.</li> <li>56. Sugar can cause atherosclerosis.</li> <li>57. Sugar can promote an elevation of low density lipoproteins (LDL).</li> <li>58. High sugar intake can impair the physiological homeostasis of many systems in the body.</li> <li>59. Sugar lowers the enzymes ability to function.</li> <li>60. Sugar intake is higher in people with</li> </ol> |
|--|--|---|

Parkinson's disease.	peripheral vascular disease significantly increases platelet adhesion.	116. In Intensive Care Units, limiting sugar saves lives.
61. Sugar can cause a permanent altering the way the proteins act in the body.	91. High sugar diet can lead to biliary tract cancer.	117. Sugar may induce cell death.
62. Sugar can increase the size of the liver by making the liver cells divide.	92. Sugar feeds cancer.	118. Sugar can increase the amount of food that you eat.
63. Sugar can increase the amount of liver fat.	93. High sugar consumption of pregnant adolescents is associated with a twofold increased risk for delivering a small-for-gestational-age (SGA) infant.	119. In juvenile rehabilitation camps, when children were put on a low sugar diet, there was a 44% drop in antisocial behavior.
64. Sugar can increase kidney size and produce pathological changes in the kidney.	94. High sugar consumption can lead to substantial decrease in gestation duration among adolescents.	120. Sugar can lead to prostate cancer.
65. Sugar can damage the pancreas.	95. Sugar slows food's travel time through the gastrointestinal tract.	121. Sugar dehydrates newborns.
66. Sugar can increase the body's fluid retention.	96. Sugar increases the concentration of bile acids in stools and bacterial enzymes in the colon. This can modify bile to produce cancer-causing compounds and colon cancer.	122. Sugar increases the estradiol in young men.
67. Sugar is enemy #1 of the bowel movement.	97. Sugar increases estradiol (the most potent form of naturally occurring estrogen) in men.	123. Sugar can cause low birth weight babies.
68. Sugar can cause myopia (nearsightedness).	98. Sugar combines and destroys phosphatase, an enzyme, which makes the process of digestion more difficult.	124. Greater consumption of refined sugar is associated with a worse outcome of schizophrenia
69. Sugar can compromise the lining of the capillaries.	99. Sugar can be a risk factor of gallbladder cancer.	125. Sugar can raise homocysteine levels in the blood stream.
70. Sugar can make the tendons more brittle.	100. Sugar is an addictive substance.	126. Sweet food items increase the risk of breast cancer.
71. Sugar can cause headaches, including migraine.	101. Sugar can be intoxicating, similar to alcohol.	127. Sugar is a risk factor in cancer of the small intestine.
72. Sugar plays a role in pancreatic cancer in women.	102. Sugar can exacerbate PMS.	128. Sugar may cause laryngeal cancer.
73. Sugar can adversely affect school children's grades and cause learning disorders..	103. Sugar given to premature babies can affect the amount of carbon dioxide they produce.	129. Sugar induces salt and water retention.
74. Sugar can cause an increase in delta, alpha, and theta brain waves.	104. Decrease in sugar intake can increase emotional stability.	130. Sugar may contribute to mild memory loss.
75. Sugar can cause depression.	105. The body changes sugar into 2 to 5 times more fat in the bloodstream than it does starch.	131. As sugar increases in the diet of 10 years olds, there is a linear decrease in the intake of many essential nutrients.
76. Sugar increases the risk of gastric cancer.	106. The rapid absorption of sugar promotes excessive food intake in obese subjects.	132. Sugar can increase the total amount of food consumed.
77. Sugar and cause dyspepsia (indigestion).	107. Sugar can worsen the symptoms of children with attention deficit hyperactivity disorder (ADHD).	133. Exposing a newborn to sugar results in a heightened preference for sucrose relative to water at 6 months and 2 years of age.
78. Sugar can increase your risk of getting gout.	108. Sugar adversely affects urinary electrolyte composition.	134. Sugar causes constipation.
79. Sugar can increase the levels of glucose in an oral glucose tolerance test over the ingestion of complex carbohydrates.	109. Sugar can slow down the ability of the adrenal glands to function.	135. Sugar causes varicose veins.
80. Sugar can increase the insulin responses in humans consuming high-sugar diets compared to low sugar diets.	110. Sugar has the potential of inducing abnormal metabolic processes in a normal healthy individual and to promote chronic degenerative diseases.	136. Sugar can cause brain decay in prediabetic and diabetic women.
81. High refined sugar diet reduces learning capacity.	111. I.Vs (intravenous feedings) of sugar water can cut off oxygen to the brain.	137. Sugar can increase the risk of stomach cancer.
82. Sugar can cause less effective functioning of two blood proteins, albumin, and lipoproteins, which may reduce the body's ability to handle fat and cholesterol.	112. High sucrose intake could be an important risk factor in lung cancer.	138. Sugar can cause metabolic syndrome.
83. Sugar can contribute to Alzheimer's disease.	113. Sugar increases the risk of polio.	139. Sugar ingestion by pregnant women increases neural tube defects in embryos.
84. Sugar can cause platelet adhesiveness.	114. High sugar intake can cause epileptic seizures.	140. Sugar can be a factor in asthma.
85. Sugar can cause hormonal imbalance; some hormones become underactive and others become overactive.	115. Sugar causes high blood pressure in obese people.	141. The higher the sugar consumption the more chances of getting irritable bowel syndrome.
86. Sugar can lead to the formation of kidney stones.		142. Sugar could affect central reward systems.
87. Sugar can lead to the hypothalamus to become highly sensitive to a large variety of stimuli.		143. Sugar can cause cancer of the rectum.
88. Sugar can lead to dizziness.		144. Sugar can cause endometrial cancer.
89. Diets high in sugar can cause free radicals and oxidative stress.		145. Sugar can cause renal (kidney) cell carcinoma.
90. High sucrose diets of subjects with		146. Sugar can cause liver tumors.

While some of the points seem to be a repetition of themselves such as the effect of sugar on children and concentration (Numbers 17, 107 and 117 for example) a number never occurred to me as being as a result of sugar. However as a Personal Trainer one area that intrigued me was the effect on elasticity (number 6) and the fact it can cause tendons to be come more brittle, number 70. The threat of damage to facial skin tone and tendons may be a good way of motivating someone who wishes to hold off the effects of ageing or develop as an athlete, to reduce sugar intake. This is due to the requirement for elasticity in the body's connective tissues to keep firm skin tone and also tendons that can stand up to the rigors of training.

The Livestrong Foundation website describes how an elevated level of blood sugar can damage the capillaries that supply the tendons with blood, leading to them becoming swollen or irritated<sup>3</sup>. It

<sup>3</sup> <http://www.livestrong.com/article/194257-causes-of-tendon-pain/>

also has a second article that describes the effect of fructose on collagen. Fructose damages the bonds between the collagen molecules making them brittle and less able to maintain the firmness of the skin<sup>4</sup>. Collagen is also an important component of tendons demonstrating that if high sugar diets damage the skin they also will effect the tendons as well<sup>5</sup>. This is born out in an article by Sarah Cimperman, ND<sup>6</sup> describing the health hazards of fructose.

In the article she describes that fructose does not fit the regular pattern of leptin production post ingestion and as such it does not create the situation that the body indicates to stop eating. In addition it is a sugar that is generally a artificial addition to the diet. Fructose from Corn Syrup is a artificial creation from agriculture. The body has only encountered fructose in the quantities that is used on food production in the last 40 or so years which is a minuscule time as far as evolution is concerned.

The issue therefore is that as fructose availability increases the body can not mitigate it internally in the same way as it can with glucose and so it continues to believe it is hungry. The risk is that more Fructose laden foods are consumed. This leads to a situation that is toxic to the body's collagen. Paradoxically such damage is only a side effect to the damage caused by other factors in over eating this product. All the classic ones of becoming over weight, damage to the cardiovascular system and risk of diabetes are there. BUT now the means to start to address this are also being damaged i.e. the mechanics of the body that supports the physical part of weight loss programmes. So someone who tried to start exercising will be trying to move a heavier object (themselves) with the levers to do that being weakened by the types of food eaten.

In my view this is one factor that adds to the barriers to change that all PTs will face especially when dealing with poor eaters(nutritionally). So what is the answer?

Clearly the first thing that must be addressed with anyone who ingests sugar at unhealthy levels is to challenge that behaviour first. If their diet is sugar laden it is likely to be deficient in other areas such as Vitamin C which is essential to damage repair. By going straight to high levels of training, as a way of loosing weight quickly, after long periods of self neglect runs the risk of injury. If however the PT and the client can get the diet under control and load up with the right nutrients the damage to collagen can be reversed allowing two benefits.

One that the client will look visibly better as their skin improves in its structure and that there is less likelihood of injury early in their programmes and if they do get injured with better circulation and healthier collagen such injuries can heal quicker. This then leads to a perception of success in the client rather than failure and as I intimated in the beginning this will be a motivational benefit which hopefully will lead to a lifestyle change permanently.

## Q7. List five healthy, low sugar snacks.

### SNACK 1

#### Sainsbury's Mixed Nut Kernels 300g

Item code: 6792282

##### Description

A mix of walnuts, Brazil nuts, hazelnuts and almonds

##### Dietary Information

Contains nuts

Not suitable for peanuts, sesame or soya allergy sufferers due to the methods used in the manufacture of this product.

##### Ingredients

Walnuts (55%), Brazil Nuts (25%), Hazelnuts (10%), Almonds (10%).

##### Nutrition

Per 100g

Per 30g serving

% based on GDA for adult

<sup>4</sup> <http://www.livestrong.com/article/297696-sugar-skin-sagging/>

<sup>5</sup> <http://www.shoulderdoc.co.uk/article.asp?article=1029>

<sup>6</sup> <http://wisdom-magazine.com/Article.aspx/1838/>

Energy	2791kJ	837kJ	-
	676kcal	203kcal	10.2%
Protein	15.1g	4.5g	10.0%
Carbohydrate	3.9g	1.2g	0.5%
Total Sugars	2.9g	0.9g	1.0%
Starch	1.0g	0.3g	-
Fat	66.7g	20.0g	28.6%
Saturates	8.1g	2.4g	12.0%
Mono unsaturates	22.1g	6.6g	-
Polyunsaturates	33.5g	10.1g	-
Fibre	7.7g	2.3g	9.6%
Salt	trace	trace	-
Sodium	trace	trace	-

## SNACK 2

### Sainsbury's Carrot & Coriander Soup 600g

Item code: 6005026

#### Description

Carrot & Coriander Soup

#### Dietary Information

Contains milk

#### Ingredients

Water; Carrot (45%); Single Cream (from Cows' Milk); Onion; Rapeseed Oil; Orange Juice from Concentrate; Salt; Cornflour; Coriander; Garlic Purée; Sugar; Ground Coriander; White Pepper.

#### Nutrition

	Per 100g	Per 1/2 pot	% based on GDA for adult
Energy	125kJ	375kJ	-
	30kcal	89kcal	4.5%
Protein	0.7g	2.1g	4.7%
Carbohydrate	3.6g	10.8g	4.7%
Total Sugars	2.9g	8.7g	9.7%
Starch	0.7g	2.1g	-
Fat	1.4g	4.2g	6.0%
Saturates	0.5g	1.5g	7.5%
Mono unsaturates	0.6g	1.8g	-
Polyunsaturates	0.2g	0.6g	-
Fibre	0.9g	2.7g	11.3%
Salt	0.45g	1.35g	22.5%
Sodium	0.18g	0.54g	22.5%

## SNACK 3

### Amisa Organic Crispbread Kamut -Wild Garlic & Green Peppercorn<sup>7</sup>

<sup>7</sup> <http://www.windmillorganics.com/>



**Ingredients**

Wholegrain kamut flour\*, margarine\* (vegetable oils & fats, water, salt, emulsifier sunflower lecithin, carrot juice, lemon juice), green pepper, camembert cheese\*, wild garlic\*, sea salt, yeast, coriander\*, lupin flour\*, malted barley flour\*, raw cane sugar\*, malted spelt flour\*, acerola cherry powder\*, potato starch\*.

\* = certified organic ingredients

**Nutritional Information**

Typical Values	Per 100g
Energy	325kcal
	1370kJ
Protein	18.3g
Carbohydrate	40.1g
of which sugars	0.1g
Fat	10.2g
of which saturates	6.7g
Dietary fibre	15.9g
Sodium	0.9g
Salt	g

**Just add a good goats cheese!!**

**SNACK 4**

**Organic Raw Sprouted Sunseed Mix <sup>8</sup>**

<sup>8</sup> <http://www.windmillorganics.com/>



At Raw Health, we use organic raw ingredients & where possible soak and sprout them to bring their natural vitality to life. Then we make delicious snacks at low temperatures to ensure the health-giving nutrients and enzymes stay alive and well.

Raw, Vegan, Organic, Handmade, Gluten-free.

## Ingredients

Sprouted Sunflower Seeds\*(84%), Sundried Tomatoes\*, Tamari Sauce\*(Soya Beans\*, Water, Sea Salt, Aspergillus Orizae), Provençale Herbs\*(3%)  
 \*= certified organic ingredients  
 Made from raw ingredients which have not been heated above 42°C

## Nutritional Information

Typical Values	Per 100g
Energy	541kcal
	2256kJ
Protein	21g
Carbohydrate	15g
of which sugars	7g
Fat	44g
of which saturates	3g
Fibre	11g
Sodium	0.675g
Salt	g

## SNACK 5

### Low-sugar, low-fat flapjacks recipe <sup>9</sup>

By Mitzie Wilson

Serving instructions

1. Makes 12-14 |
2. Takes 20 minutes to make and 20-25 minutes to bake, plus cooling |
3. Rate 1 star Rate 2 stars Rate 3 stars Rate 4 stars Rate 5 stars

<sup>9</sup> <http://www.deliciousmagazine.co.uk/recipes/low-sugar-low-fat-flapjacks>

## Rating

We've used puréed dates instead of sugar to make these moist flapjacks.



## Ingredients

1. 150g reduced-fat butter (we used Lurpak Lighter Spreadable), plus extra for greasing
2. 150g ready-to-eat, soft, stoned dates
3. 3 tbsp apple juice
4. 30g toasted whole hazelnuts, finely chopped
5. 100g ready-to-eat dried apricots, finely chopped
6. 225g porridge oats

## Method

1. Preheat the oven to 190°C/fan170°C/gas 5. Grease and line a shallow 17.5cm-square tin with baking paper.
2. Put the dates and apple juice in a food processor and whizz until smooth. Melt the butter in a large pan over a low heat. Add the date purée and all the other ingredients. Stir well, then press into the tin with damp hands. Bake for 20-25 minutes, or until just golden.
3. Remove from the oven and cool for 10 minutes. Cut into squares in the tin. Cool completely before turning out and cutting again to separate.

## Nutritional info

Per flapjack: 185kcal, 9.6g fat (3.8g saturated), 3g protein, 20g carbs, 7.3g sugar, trace salt