

# Potatoes – natural goodness

Messaging for One Voice

## 1. ‘Good for you’ - a starchy carbohydrate that can reduce the energy density of a meal

- Potatoes are a naturally fat free, a source of fibre and vitamin B6.
- Baked, boiled and salads get four green lights and account for two-thirds (67%) of meals made from fresh potatoes. Roasties, chips and mash get a mix of green and amber and are great as part of a balanced diet.
- Surprising facts:
  - A jacket potato (180g) provides 57% of your RDA of potassium which is more than three medium bananas (284g)
  - A portion of new or salad potatoes (175g) provides 20% of your RDA of iron, which is more than two portions of spinach (175g)
  - A portion of new or salad potatoes (175g) provides 43% of your RDA of vitamin B6. which is the same as eating approximately 50 Brazil Nuts (200g)

Chart one: how fresh potatoes are eaten

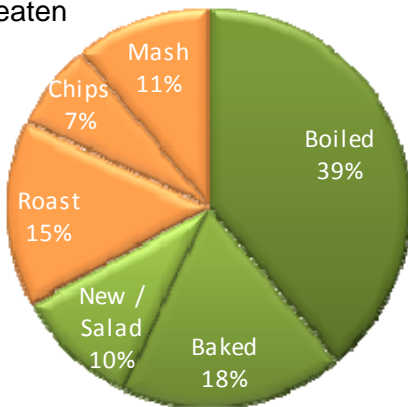
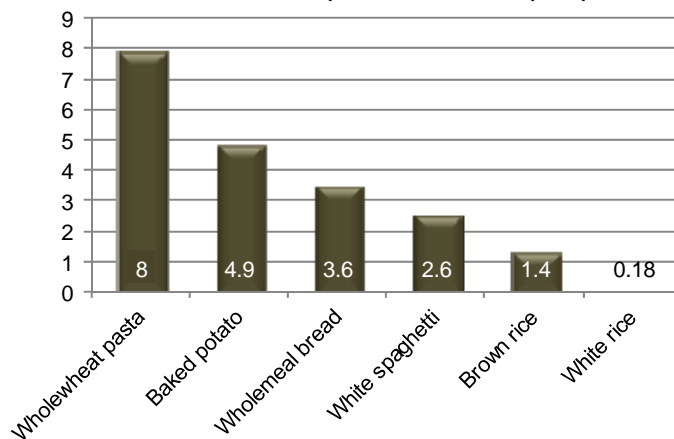


Chart two: comparison of fibre per portion



Source: various (see annex one)

## 2. ‘Good for the planet’ – an environmentally sustainable choice

- Potatoes have a low environmental impact.
- Britain is the right place to grow potatoes, using just 29% of water compared to the global average. Farmers use less than 1% of abstracted water but the availability of water is a key risk to the industry. Potatoes are the dominant outdoor crop category in terms of additional water required through irrigation.
- The British potato industry has increased yields by 18% in the last 20 years.
- Fertilizer use has been reduced by 30% in the last 30 years, with on-going investment to look at further reductions.
- The British potato industry looks after the environment with three quarters of growers involved in environmental stewardships, which helps look after our countryside.

Source: Potatoes: A low impact crop? (ADAS 2011/12)

## 3. Good for the pocket – reassuringly affordable in the face of rising food bills

- Potatoes are a great, nutritious option for low income households and families facing tightened budgets.
- A pack of potatoes is on average £0.79 per kilo, or 15p for a baked potato which can be made into a nourishing meal with the simple addition of some baked beans.

Source: Kantar WorldPanel

**4. ‘Good for Great Britain plc’ - £4.7bn contributor to the economy including £209m of exports**

- Over 2,000 specialist growers produce around 5m tonnes per annum and employ over 16,000 people – helping support vibrant rural communities.
- Scotland has one of the largest high health seed potato areas in the European Union and exports to markets all over the world.
- Nearly 90% of fresh potatoes sold in Great Britain are British, the vast majority of which are Red Tractor Assured.

Source: AHDB/Potato Council MI

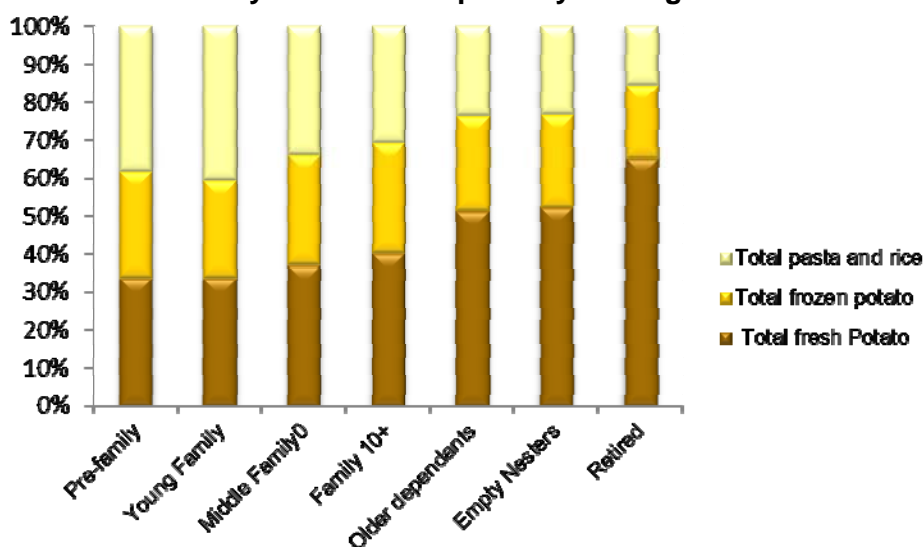
**5. ‘Good for so many meals’ – the potato forms parts of hundreds of recipes to suit every palate – from fluffy roasties, to smooth mash or steamed salads.**

- Potatoes are versatile, but choosing the right potato variety delivers a better cooking and eating experience.

**The main alternatives – rice and pasta**

- For most people consumption of starchy foods is below recommended levels. Until recently the main dietary message was to choose wholegrains (which excluded potatoes while promoting rice and pasta), however, this has now been updated to include potatoes in their skins.
- Potatoes are increasingly being substituted in the British diet by other carbohydrates, particularly rice and pasta.
- A portion of boiled potatoes is lower in fat and calories than rice (boiled basmati) or pasta (white spaghetti).
- Producing potatoes to get them ready to buy on the retail shelf uses less water and fewer emissions than rice or pasta.

**Chart three: carbohydrate consumption by lifestage**



|                               | <b>Portion of British potatoes</b><br>(boiled in unsalted water) | <b>Portion of Italian pasta</b><br>(white spaghetti, boiled) | <b>Portion of Indian Basmati rice</b><br>(Basmati rice, boiled) |
|-------------------------------|--|--|---|
| <b>Fat (g)</b>                | 0.2  | 1.54   | 2.16  |
| <b>Calories (kcal)</b>        | 126  | 229  | 216   |
| <b>GHG emissions (kg CO2)</b> | 0.05   | 0.12   | 0.17  |
| <b>Water (litres)</b>         | 1.2  | 1.8  | 160   |

Source: various (see annex two)

## Annex one

### Section one: 'Good for you' - a starchy carbohydrate that can reduce the energy density of a meal

Potatoes are a naturally fat free, source of fibre and vitamin B6.

| Claim              | Criteria   |
|--------------------|--|
| Naturally fat free | Less than or equal to 0.5g fat per 100g          |
| Source of fibre    | Greater than or equal to 1.5g fibre per 100 kcal |

(as listed in Annex of Regulations (EC) No 1924/2006)

The energy value of fibre was changed by Commission Directive 2008/100/EC. To reflect new scientific information, fibre is now deemed to provide a small amount of energy, so 1g of fibre provides 8KJ or 2kcal. Fibre figures given in McCance and Widdowson (FSA, 2002) food tables are based on the Englyst method of analysis and give figures for non-starch polysaccharides (NSP). The result is not quite the same as is required for legally declaring 'fibre'. The figures have been converted using the 'AOAC' factor (x1.33) given in FSA (2002), to be consistent with the legal rules.

| Nutrient             | Current RDA |
|----------------------|-------------|
| Thiamin / Vitamin B1 | 1.1mg       |
| Vitamin B6           | 1.4mg       |
| Folic acid           | 200µg       |
| Potassium            | 200mg       |

Source / contains 15% of RDA

Source: Food Labelling (Nutrition Information)(England) Regulation 2009

| Baked potatoes (skin and flesh) * | GDA  | RDA  | Per 100g | % RDA | Per 180g medium potato | % RDA |
|-----------------------------------|------|------|----------|-------|------------------------|-------|
| Energy (kcal)                     | 2000 |      | 136      |       | 245                    |       |
| Fat (g)                           | 70   |      | 0.2      |       | 0.4                    |       |
| Sat fat (g)                       | 20   |      | trace    |       | Trace                  |       |
| Fibre NSP (g)                     | 18   |      | 2.7      |       | 4.9                    |       |
| Sodium (mg)                       | 2400 |      | 12       |       | 22                     |       |
| Salt (g)                          | 6    |      | 0.03     |       | 0.05                   |       |
| Vitamin C (mg)                    |      | 80   | 14       | 18    | 25                     | 31    |
| Vitamin B1 / Thiamin (mg)         |      | 1.1  | 0.37     | 34    | 0.67                   | 60    |
| Vitamin B6 (mg)                   |      | 1.4  | 0.5      | 38    | 1.0                    | 71    |
| Folic acid (mcg)                  |      | 200  | 44       | 22    | 79                     | 40    |
| Potassium (mg)                    |      | 2000 | 630      | 32    | 1134                   | 57    |
| Iron                              |      | 14   | 0.7      | 5     | 1.3                    | 9     |

| Potatoes (boiled in unsalted water) * | GDA  | RDA  | Per 100g | % RDA | Per 175g portion | % RDA |
|---------------------------------------|------|------|----------|-------|------------------|-------|
| Energy (kcal)                         | 2000 |      | 72       |       | 126              |       |
| Fat (g)                               | 70   |      | 0.1      |       | 0.2              |       |
| Sat fat (g)                           | 20   |      | trace    |       | trace            |       |
| Fibre NSP (g)                         | 18   |      | 1.2      |       | 2.1              |       |
| Sodium (mg)                           | 2400 |      | 7        |       | 12               |       |
| Salt (g)                              | 6    |      | 0.02     |       | 0.03             |       |
| Vitamin C (mg)                        |      | 80   | 6        | 8     | 11               | 14    |
| Vitamin B1 /Thiamin (mg)              |      | 1.1  | 0.18     | 16    | 0.32             | 29    |
| Vitamin B6 (mg)                       |      | 1.4  | 0.3      | 21    | 0.6              | 43    |
| Folic acid (mcg)                      |      | 200  | 19       | 10    | 33               | 17    |
| Potassium (mg)                        |      | 2000 | 280      | 14    | 490              | 25    |
| Iron                                  |      | 14   | 0.4      | 3     | 0.7              | 5     |

Potatoes are naturally fat free and have a low energy density

Potatoes are a source of vitamin B1

Potatoes are a source of fibre

| <b>New Potatoes with skins (boiled in unsalted water) *</b> | GDA  | RDA  | Per 100g | % RDA | Per 175g portion | % RDA |
|---|------|------|----------|-------|------------------|-------|
| Energy (kcal)   | 2000 |      | 66       |       | 116              |       |
| Fat (g)   | 70   |      | 0.3      |       | 0.5              |       |
| Sat fat (g)   | 20   |      | 0.1      |       | 0.2              |       |
| Fibre NSP (g)   | 18   |      | 1.5      |       | 2.6              |       |
| Sodium (mg)   | 2400 |      | 10       |       | 18               |       |
| Salt (g)  | 6    |      | 0.03     |       | 0.04             |       |
| Vitamin C (mg)  |      | 80   | 9        | 11    | 16               | 20    |
| Thiamin (mg)  |      | 1.1  | 0.13     | 12    | 0.23             | 21    |
| Vitamin B6 (mg)   |      | 1.4  | 0.3      | 21    | 0.6              | 43    |
| Folic acid (mcg)  |      | 200  | 19       | 10    | 33               | 17    |
| Potassium (mg)  |      | 2000 | 430      | 22    | 753              | 38    |
| Iron  |      | 14   | 1.6      | 11    | 2.8              | 20    |

\* Source: McCance and Widdowson's *The Composition of Foods Summary Sixth Edition*

## Traffic light labelling

If you buy a food that has all or mostly green lights, you know straight away that it's a healthier choice. An amber light means neither high nor low, so you can eat foods with all or mostly amber lights most of the time.

**Total fat** - High: more than 17.5g of fat per 100g

Low: 3g of fat or less per 100g

**Saturated fat** - High: more than 5g of saturated fat per 100g

Low: 1.5g of saturated fat or less per 100g

**Sugars** - High: more than 22.5g of total sugars per 100g

Low: 5g of total sugars or less per 100g

**Salt** - High: more than 1.5g of salt per 100g

Low: 0.3g of salt or less per 100g

Source: <http://www.nhs.uk/Livewell/Goodfood/Pages/food-labelling.aspx>

## Main potato formats and traffic light data

|                              | Boiled<br>Boiled in unsalted water |              | Baked<br>Baked flesh and skin |              | New / Salad<br>Boiled in unsalted water |              | Roast<br>Roast in blended oil |              | Chips<br>Fried in vegetable oil |              | Mash<br>Mashed with butter |             |
|------------------------------|------------------------------------|--------------|-------------------------------|--------------|---|--------------|-------------------------------|--------------|---------------------------------|--------------|----------------------------|-------------|
|                              | 100g                               | Portion 175g | 100g                          | Portion 175g | 100g                                    | Portion 185g | 100g                          | Portion 200g | 100g                            | Portion 165g | 100g                       | Portion 60g |
| Proportion of fresh potatoes | 39%                                |              | 18%                           |              | 10%                                     |              | 15%                           |              | 7%                              |              | 11%                        |             |
| Calories (kcal)              | 72                                 | 126          | 66                            | 116          | 136                                     | 251          | 149                           | 298          | 162                             | 267          | 104                        | 62          |
| Fat (g)                      | 0.1                                | 0.2          | 0.3                           | 0.5          | 0.2                                     | 0.37         | 4.5                           | 9            | 4.2                             | 6.9          | 4.3                        | 2.5         |
| Saturates (g)                | 0.1                                | 0.2          | 0.1                           | 0.2          | Trace                                   | Trace        | 0.4                           | 0.8          | 1.8                             | 2.9          | 2.8                        | 1.6         |
| Sugars (g)                   | 1.1                                | 2.0          | 1.3                           | 2.2          | 1.2                                     | 2.2          | 0.6                           | 1.2          | 0.7                             | 1.1          | 1.0                        | 0.6         |
| Salt (mg)                    | 0.02                               | 0.03         | 0.03                          | 0.05         | 0.03                                    | 0.05         | 9                             | 18           | 53                              | 87           | 43                         | 25          |

Proportion of fresh potatoes source: Kantar Worldpanel 12m/e November 2012

Portion size source: Ministry of Agriculture, Fisheries and Food Second Edition

Nutritional data source: McCance and Widdowson's *The Composition of Foods Summary Sixth Edition*

## Comparison of fibre provided

|               | Wholewheat pasta |              | Baked potato |              | Wholemeal bread |             | Brown rice |              | White spaghetti |              | White rice |              |
|---------------|------------------|--------------|--------------|--------------|-----------------|-------------|------------|--------------|-----------------|--------------|------------|--------------|
|               | 100g             | Portion 230g | 100g         | Portion 185g | 100g            | Portion 72g | 100g       | Portion 180g | 100g            | Portion 220g | 100g       | Portion 180g |
| Fibre NSP (g) | 3.5              | 8.0          | 2.7          | 4.9          | 5.0             | 3.6         | 0.8        | 1.4          | 1.2             | 2.6          | 0.1        | 0.18         |

Comparisons of potatoes with other food are based on standard portion sizes

Source: *Food Portion Sizes* (second edition 1993) HMSO

Medium portion of boiled new potatoes with skins – 175g

Medium baked potato – 180g

Medium portion of boiled easy cook white rice – 180g

Medium portion of boiled white spaghetti – 220g

2 large medium cut slices of wholemeal bread – 72g

| Bananas (raw)                      | Per 80g portion         | Per 100g banana | GDA  | RDA  | Per 28g portion | Per 100g Brazil nuts | GDA  | RDA  | Per 80g portion spinach | Per 100g spinach | GDA  | RDA  |
|------------------------------------|-------------------------|-----------------|------|------|-----------------|----------------------|------|------|-------------------------|------------------|------|------|
| Brazil nuts                        | – a medium sized banana |                 |      |      | 6-8 Brazil nuts |                      |      |      |                         |                  |      |      |
| Spinach (boiled in unsalted water) |                         |                 |      |      |                 |                      |      |      |                         |                  |      |      |
| Energy (kcal)                      | 76                      | 95              | 2000 |      | 190.96          | 682                  | 2000 |      | 15                      | 19               | 2000 |      |
| Fat (g)                            | 0.24                    | 0.3             | 70   |      | 19.1            | 68.2                 | 70   |      | 0.6                     | 0.8              | 70   |      |
| Sat fat (g)                        | 0.08                    | 0.1             | 20   |      | 4.6             | 16.4                 | 20   |      | 0.1                     | 0.1              | 20   |      |
| Fibre NSP (g)                      | 0.88                    | 1.1             | 18   |      | 1.2             | 4.3                  | 18   |      | 1.7                     | 2.1              | 18   |      |
| Sodium (mg)                        | 0.8                     | 1               | 2400 |      | 0.8             | 3                    | 2400 |      | 96                      | 120              | 2400 |      |
| Salt (g)                           | 0.002                   | 0.003           | 6    |      | 0.00            | 0.01                 | 6    |      | 0.24                    | 0.30             | 6    |      |
| Vitamin C (mg)                     | 8.8                     | 11              |      | 80   | 0               | 0                    |      | 80   | 6.4                     | 8                |      | 80   |
| Vitamin B1 /Thiamin (mg)           | 0.03                    | 0.04            |      | 1.1  | 0.2             | 0.7                  |      | 1.1  | 0.05                    | 0.06             |      | 1.1  |
| Vitamin B6 (mg)                    | 0.2                     | 0.3             |      | 1.4  | 0.1             | 0.3                  |      | 1.4  | 0.1                     | 0.1              |      | 1.4  |
| Folic acid (mcg)                   | 11.2                    | 14              |      | 200  | 6               | 21                   |      | 200  | 64.8                    | 81               |      | 200  |
| Potassium (mg)                     | 320                     | 400             |      | 2000 | 185             | 660                  |      | 2000 | 184                     | 230              |      | 2000 |
| Iron                               | 0.24                    | 0.3             |      | 14   | 0.7             | 2.5                  |      | 14   | 1.28                    | 1.6              |      | 14   |

## Annex two

### The main alternatives – rice and pasta

**Starchy foods are our main source of carbohydrate and play an important role in a healthy diet.**

Starchy foods such as potatoes, bread, cereals, rice and pasta should make up about a third of the food you eat. Where you can, choose wholegrain varieties, or eat potatoes with their skins on for more fibre. Starch is the most common form of carbohydrate in our diet. We should eat some starchy foods every day as part of a healthy balanced diet.

Data published by the National Diet and Nutrition Survey, which looks at food consumption in the UK, shows that most of us should be eating more starchy foods.

### **Why do you need starchy foods?**

Starchy foods are a good source of energy and the main source of a range of nutrients in our diet. As well as starch, they contain fibre, calcium, iron and B vitamins.

Some people think starchy foods are fattening, but gram for gram they contain fewer than half the calories of fat. Just watch out for the added fats used when you cook and serve them: this is what increases the calorie content.

### **Starchy foods and fibre**

Wholegrain varieties of starchy foods, and potatoes – particularly when eaten with their skins on – are good sources of fibre. Fibre can help to keep our bowels healthy and can help us to feel full, which means we are less likely to eat too much. This makes wholegrain starchy foods and potatoes eaten with their skins a particularly good choice if you are trying to lose weight.

Fibre is only found in foods that come from plants. There are two types of fibre:

- Insoluble fibre. The body can't digest this type of fibre, so it passes through the gut, helping other food and waste products move through the gut more easily. Wholegrain bread and breakfast cereals, brown rice, and wholewheat pasta are good sources of this kind of fibre.
- Soluble fibre. This type of fibre can be partly digested and may help reduce the amount of cholesterol in the blood. Oats and pulses are good sources.

Source: <http://www.nhs.uk/Livewell/Goodfood/Pages/starchy-foods.aspx>

|                               | <b>Portion of British potatoes</b><br>(boiled in unsalted water) | <b>Portion of Italian pasta</b><br>(white spaghetti, boiled) | <b>Portion of Indian Basmati rice</b><br>(Basmati rice, boiled) |
|-------------------------------|--|--|---|
| <b>Fat (g)</b>                | 0.2  | 1.54   | 2.16  |
| <b>Calories (kcal)</b>        | 126  | 229  | 216   |
| <b>GHG emissions (kg CO2)</b> | 0.05   | 0.12   | 0.17  |
| <b>Water (litres)</b>         | 1.2  | 1.8  | 160   |

Source: McCance and Widdowson's *The Composition of Foods* Summary Sixth Edition

Source: British Nutrition Foundation for Basmati Rice

Source: Potatoes compared to rice and pasta?(Cranfield 2013)

|                             | <b>Pre-family</b> | <b>Young Family</b> | <b>Middle Family</b> | <b>Family 10+</b> | <b>Older dependants</b> | <b>Empty Nesters</b> | <b>Retired</b> |
|-----------------------------|-------------------|---------------------|----------------------|-------------------|-------------------------|----------------------|----------------|
| <b>Total fresh Potato</b>   | 33.8              | 33.7                | 37.1                 | 40.3              | 51.6                    | 52.4                 | 65.2           |
| <b>Total frozen potato</b>  | 28.0              | 25.9                | 29.0                 | 28.9              | 25.0                    | 24.2                 | 19.3           |
| <b>Total pasta and rice</b> | 38.2              | 40.4                | 33.9                 | 30.8              | 23.5                    | 23.4                 | 15.5           |

Source: Kantar WorldPanel 52 w/e 9 June 2013