

The Muslim Jewish Forum of Greater Manchester
Eating and Our Health

Reducing your weight

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Synopsis

- About the speaker
- Mohammed Amin's weight history
- The science behind body weight
- Advice on reducing your weight

Mohammed Amin MBE FRSA



Mohammed Amin studied mathematics, physics and chemistry at A Level.

He graduated in mathematics from Cambridge University.

Since 2008 he has subscribed to “Scientific American” magazine.

Professionally he is a Chartered Accountant and Chartered Tax Adviser and before retirement was a tax partner in PricewaterhouseCoopers.

Amin is Co-Chair of the Muslim Jewish Forum of Greater Manchester.

www.mohammedamin.com

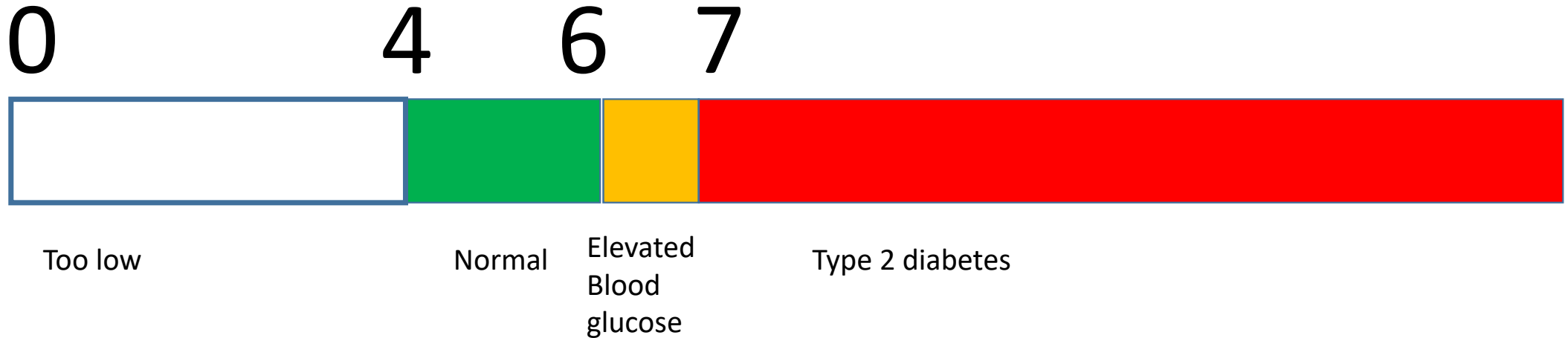
Speaker's weight history

A weighty lifetime

- Mother doted on me
- Always chubby
- Age 16, 12 stone = 76 kg
- 24-27 “super fit”, 90 minutes of squash
- 32 inch waist when got married.
 - Estimate 10 stone = 63.5 kg
- Age 62, 87 kg
- Annual medical

Annual medical 2013

- Fasting blood glucose 7 mmol / L (millimoles per litre)
- Remeasured two weeks later, 7.2 mmol / L



Two things help your blood sugar

- Exercise
- Losing weight

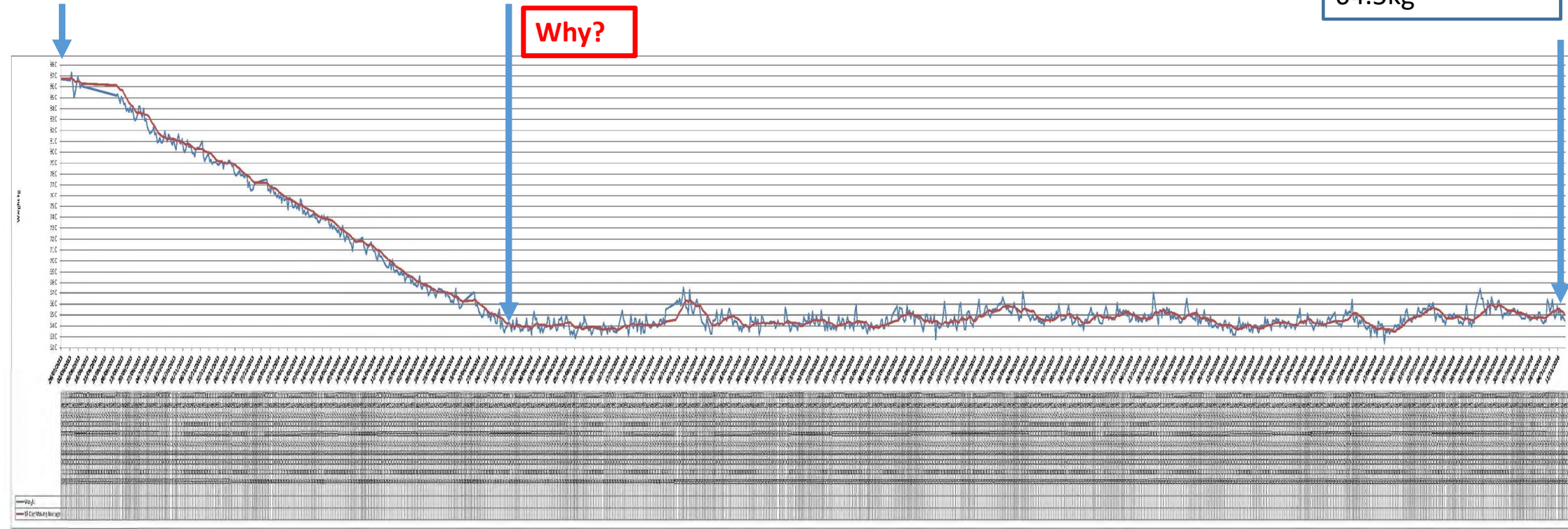
What happened next

July 2013 87kg

July 2014 63.5kg

16 Nov 2016
64.5kg

Why?



Body mass index (BMI)

$$\text{BMI} = \frac{\text{Weight (kg)}}{\text{Height squared (m)}}$$

BMI ranges

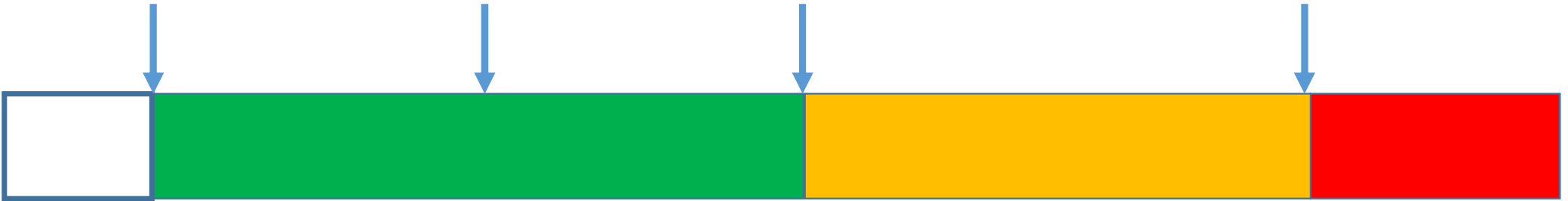
Half way in normal range

18.5

21.75

25

30



Too low

Normal

Overweight

Obese

My target weight

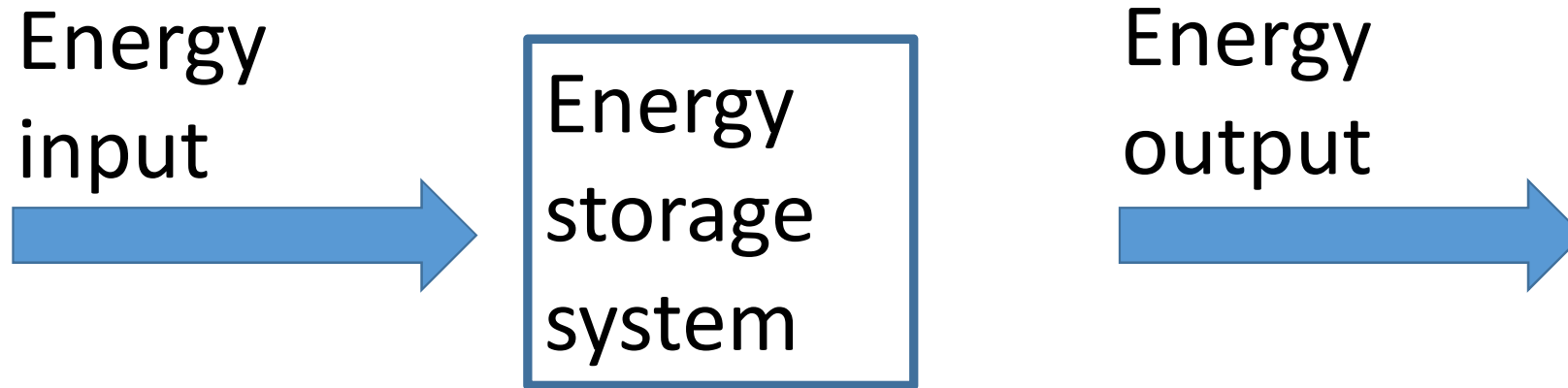
$$21.75 = \frac{T}{1.71 \times 1.71}$$

The science behind weight

Energy

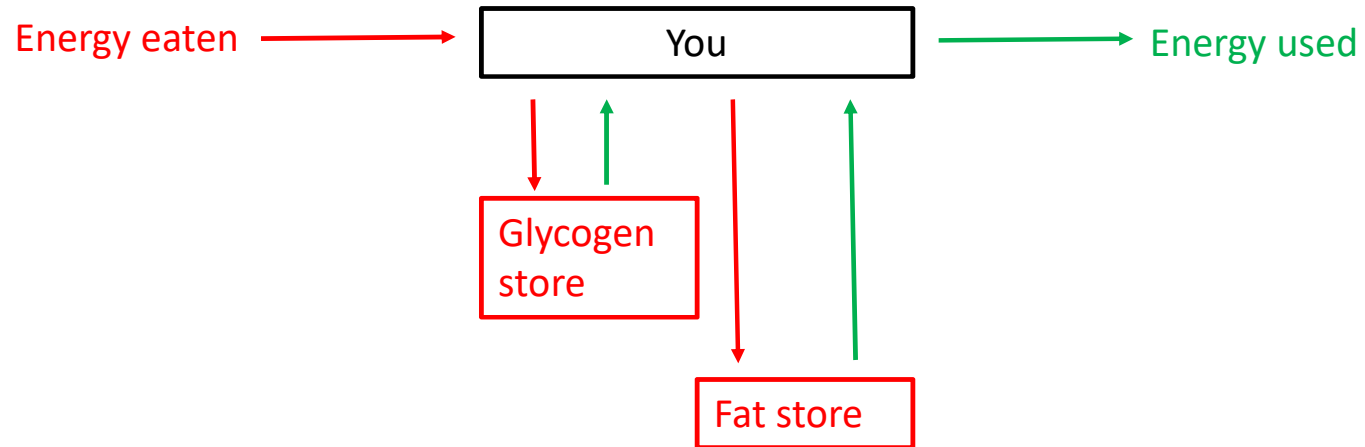
- “The power to do work”
- 1 joule = A force of 1 newton acting for a distance of 1 metre
 - 1 newton = force that gives 1kg mass an acceleration of 1 metre per second per second
- 1 calorie = amount of heat energy that will raise the temperature of 1g of water by 1 degree Celsius.
- calorie is very small, so normally work in 1,000 calorie units, kilocalories abbreviated as kcal.

Energy is conserved



$$\text{input} - \text{output} = \text{energy stored}$$

Human energy storage



Adding or reducing weight

Energy eaten > Energy used



Energy stored = weight gain

Energy eaten < Energy used

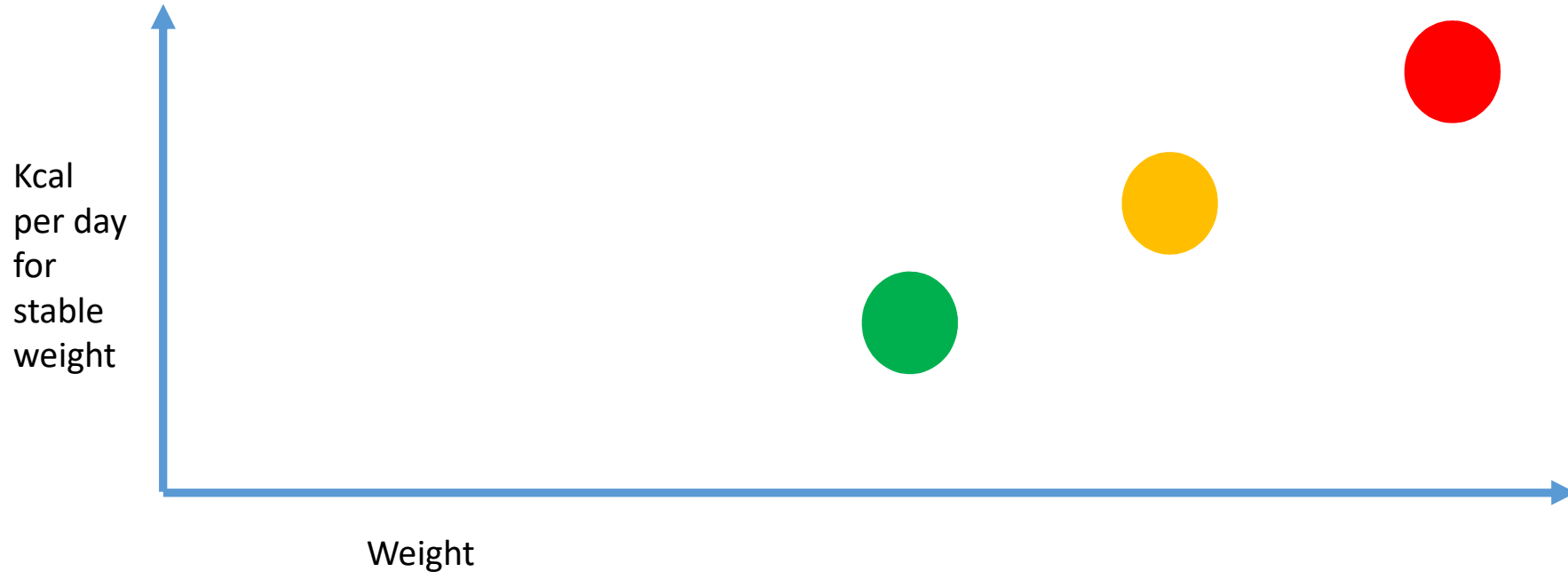


Energy used from store = weight loss

How many kcal per day?

- Depends on your lifestyle
- Traditional answer ~2,000 kcal per day
- The more you weigh, the more kcal per day you need to sustain your weight

Kcal per day for a stable weight



Advice on reducing weight

Losing weight is simple

- Need energy input < energy output
- So either:
 - Reduce input
 - Increase output, or
 - Both
- 1 kg of body fat = 7,700 kcal
- If (daily output – daily input) = 500 kcal, in 15 days the shortage = 7,500 kcal = approximately 1kg off your weight

Increasing output is hard

- http://www.freedieting.com/tools/calories_burned.htm
- My age and weight
- 60 minutes walking at 2.5 mph = 161 kcal
- 60 minutes walking at 5 mph = 444 kcal
- 60 minutes recreational backstroke swimming = 284 kcal

161 kcal = approximately 2 biscuits

Reducing input is easier

- Property values: “location, location, location”
- Weight: “kcal, kcal, kcal”
- Count daily kcal input
- Reduce it
- You will feel hungry
- Some things you can eat lots of, if low in calories
 - 400g broccoli (1 big head) = ~100 kcal
- Become an expert on kcals

Most foods are packaged




Read the nutritional label

Crunchy biscuits with roasted peanuts 200g e

For best before date: see back of pack.
Store in a cool, dry place. Once opened, store in an airtight container for best quality.

Our ingredients
Wheat Flour, Peanuts (25%), Sugar, Vegetable Oil (Palm Oil, Rapeseed Oil, Coconut Oil, Palm Kernel Oil), Egg, Milk Proteins (Cows' Milk), Raising Agents: Sodium Carbonate, Glucono-delta-lactone; Salt, Invert Sugar Syrup, Dextrose, Flavouring, Sunflower Oil.

 **Allergy advice:** For allergens, including cereals containing gluten, see ingredients in **bold**. Also, not suitable for customers with an allergy to other nuts, rye, barley, oats, spelt or soya due to manufacturing methods.

| Nutrition Typical values | per 100g | per cookie | % adult RI per cookie | adult RI |
|---------------------------|--------------|--------------|-----------------------|----------|
| Energy kJ | 2207 | 368 | | 8400 |
| Energy kcal | 528 | 88 | 4% | 2000 |
| Fat | 28.2g | 4.7g | 7% | 70g |
| of which saturates | 8.7g | 1.5g | 8% | 20g |
| - mono-unsaturates | 15.4g | 2.6g | - | - |
| - polyunsaturates | 2.9g | 0.5g | - | - |
| Carbohydrate | 57.3g | 9.6g | 4% | 260g |
| of which sugars | 27.2g | 4.6g | 5% | 90g |
| - starch | 30.1g | 5.0g | - | - |
| Fibre | 1.9g | <0.5g | - | - |
| Protein | 10.2g | 1.7g | 3% | 50g |
| Salt | 0.40g | 0.07g | 1% | 6g |

RI = Reference Intakes of an average adult (8400kJ/2000kcal)

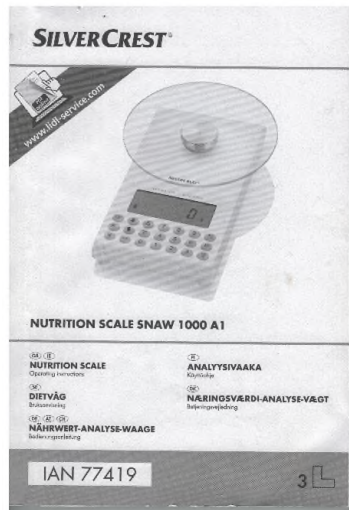
Comparison



OR

1 hour of
walking at 2.5
mph

Nutritional scale



| SILVERCREST | | | |
|-------------------------------------|----------------------|---|---------|
| 515 | Brussels sprouts | | |
| 516 | Brussels sprouts | cooked, drained | |
| 517 | Red cabbage | raw | cabbage |
| 518 | Sauerkraut | drained | |
| 519 | Chive | | |
| 520 | Soybean sprouts | | |
| 521 | Asparagus | | |
| 522 | Asparagus | cooked, drained | |
| 523 | Asparagus | canned | |
| 524 | Spinach | | |
| 525 | Spinach | cooked, drained | |
| 526 | Spinach | canned | |
| 527 | Spinach juice | | |
| 528 | White cabbage | Cabbage | |
| 529 | Savoy cabbage | Cabbage | |
| 530 | Onion | | |
| 531 | Onion | dried | |
| Fruit vegetables | | | |
| 532 | Aubergine | Eggplant | |
| 533 | Beans | Runner beans, green | |
| 534 | Beans | Runner beans, green, canned | |
| 535 | Beans | French or cutting beans, green, dried | |
| 536 | Cucumber | | |
| 537 | Cucumber | Pickled gherkin, salt-dill pickles, lactic acid | |
| 538 | Pumpkin | | |
| 539 | Paprika fruit | Paprika pods | |
| 540 | Squash | | |
| 541 | Tomato | | |
| 542 | Tomato | canned | |
| 543 | Tomato puree | | |
| 544 | Tomato juice | commercial product | |
| 545 | Zucchini | Summer Squash | |
| 546 | Sweet corn | Edible sweet corn | |
| Wild herbs / wild vegetables | | | |
| 547 | Barbaramelon herb | leaf, winter cress | |
| 548 | Wild garlic | leaf | |
| 549 | Common plantain | leaf | |
| 550 | French herb | leaf, shoot tips | |
| 551 | Stinging nettle | leaf | |
| 552 | Garden orache | leaf | |
| 553 | Goutweed | leaf, goatweed | |
| 554 | Great Burdock | leaf | |
| 555 | Ground ivy | leaf | |
| 556 | Good Henry | leaf | |
| 557 | True caraway | leaf | |
| 558 | True caraway | root | |
| 559 | Wild Mallow | leaf | |
| 560 | Angula | | |
| 561 | Sorrel | leaf | |
| 562 | Plantain | leaf | |
| 563 | White Doef | leaf | |
| 564 | Nettle | leaf | |
| 564 | Chickweed | leaf | |
| 565 | Meadow Salsify | leaf | |
| 566 | Wissavakranch | leaf | |
| Legumes / Oilseeds | | | |
| 567 | Borer beans | Cowpea, seeds, dry | |
| 568 | Beans | Garden beans, seeds, white, dry | |
| 569 | Beans | Seeds, white, cooked | |
| 570 | Peas | Pod and seeds, green | |
| 571 | Peas | Seeds, green, cooked, drained | |
| 572 | Peas | Seeds, green, canned | |
| 573 | Peas | Seeds, dry | |
| 574 | Goa beans | Wing, Manila, Princess, seeds, dry | |
| 575 | Garbanzo bean | Seeds, green | |
| 576 | Garbanzo bean | Seeds, dry | |
| 577 | Flax | Flaxseed | |
| 578 | Lima beans | Maion beans, butter beans, seeds, dry | |
| 579 | Lentil | Seeds, dry | |
| 580 | Lentils | Seeds, cooked | |
| 581 | Poppy | Opium poppies seeds, dry | |
| 582 | Mung beans | Seeds, dry | |
| 583 | Sesame | Seeds, dry | |
| 584 | Soybeans | Seeds, dry | |
| 585 | Soy flour | full fat | |
| 586 | Soy milk | | |
| 587 | Sunflower | Seeds, dry | |
| 588 | Sunflower seed flour | | |
| 589 | Pigeonpea | Pea beans, pigeon peas, seeds, dry | |
| 590 | Tolu | | |
| 591 | Urd beans | Mung beans, seeds, dry | |
| Mushrooms | | | |
| 592 | Oyster mushroom | Oyster mushrooms | |
| 593 | Birch fungus | | |
| 594 | Butter mushroom | | |
| 595 | Mushrooms | Cultivated mushroom | |
| 596 | Mushrooms | canned | |
| 597 | Honey mushrooms | | |
| 598 | Museli | Edible moral | |
| 599 | Chanterelle | Rehling | |
| 600 | Chanterelles | canned | |
| 601 | Chanterelle | dried | |
| 602 | Saffron milk cap | | |
| 603 | Bolete | | |
| 604 | Porcini mushrooms | | |
| 605 | Porcini mushrooms | dried | |
| 606 | Truffle | | |
| Fruits | | | |
| Stone fruit | | | |
| 607 | Apple | | |
| 608 | Apple | dried | |
| 609 | Apple sauce | | |
| 610 | Pear | | |
| 611 | Pear | canned | |
| 612 | Guaiac | | |
| Stone fruit | | | |
| 613 | Apricots | | |
| 614 | Apricots | dried | |
| 615 | Apricots | canned | |
| 616 | Cherries | sour | |

- Calculating calories in home cooking + non-packaged food
- Use a few times then just remember calorie amounts e.g. 1 bowl chicken soup!

Weighing yourself

- “What gets measured gets done”
- Good quality digital scale
- Consistency
 - Same time of day
 - Wearing same clothes
 - Same stage in routine. E.g. after breakfast and bathroom.
- Weigh daily
- Write it down. Memory is unreliable.

Coping with lapses

- Perfection is impossible
- Weddings, other celebrations, etc.
- Make selections that control calorie intake
- Don't try to compensate for lapses:
 - If you stick to controlling calories, weight will go back down.

Q & A