

The Facts

Information from FDF – the voice of the food and drink sector

Science behind Guideline Daily Amounts

Guideline Daily Amounts (GDAs) are intended to translate science into consumer friendly information and provide guidelines to help consumers put the nutrition information they read on a food label into the context of their overall diet. GDAs began life in 1996 as Daily Guideline Intakes for use by the Ministry of Agriculture Fisheries and Food (MAFF). For labelling purposes, in 1998 'GDAs' for calories (energy), fat and saturated fat were developed by a consortium of experts from the UK government, consumer organisations and the food industry, which was overseen by the IGD (Institute of Grocery Distribution). In 2004, the GDAs were reviewed, developed and extended to include values for carbohydrates, sugars, protein, salt and fibre and resulted in the publication of the 'Review of existing and development of new GDAs: Decisions and Rationale' (2005)¹, which has now replaced the 1998 report. The aim of this report was to encourage consistent use of GDAs across government, industry and other organisations.

Method of developing the GDA figures

The IGD technical working group developed a range of GDA values for males, females and children covering a variety of age groups². All values were based on the recommendations of the UK Committee on Medical Aspects of Food Policy (COMA) report on Dietary Reference Values². This is with the exception of the fibre figure, which has been based on the American Association of Analytical Chemists (AOAC) method, as recommended for the UK by the Food Standards Agency³, and salt figures, where the more recent UK SACN (Scientific Advisory Committee on Nutrition, advisors to the FSA) figures were used⁴. To date in the UK, the COMA DRV report has not been superseded and still stands as the basis for

UK Guideline Daily Amounts

	Calories	Sugars	Fat	Saturates	Salt
Women	2000	90g	70g	20g	6g
Men	2500	120g	95g	30g	6g
Children (5-10)	1800	85g	70g	20g	4g

dietary recommendations in the UK, although a SACN review of energy requirements is expected in early 2010.

GDAs internationally

GDA values are broadly consistent between the UK, Europe and internationally. The World Health Organisation (WHO)⁷ and Eurodiet⁸ figures for energy are marginally lower at 30% (total energy from fat, excluding alcohol) than the UK COMA values² at 35%. This is due to minor differences which even out when amounts in grams are rounded up or down. In March 2009 the European Food Safety Authority⁹

published its opinion on proposed reference intake levels for Europe, which were found to be consistent with the figures behind GDAs.

“Guideline Daily Amounts enable consumers to make informed choices on balancing their diet by identifying guideline levels for key nutrients and calories consumed each day and how much a portion of a particular food contributes to that allowance”

Prof. Tom Sanders, Head of Nutritional Sciences at King's College London.

Other relevant terminology

Dietary Reference Values (DRV) are estimates of the requirements for groups of people and are not recommendations or goals for individuals⁵. It is a term used to cover lower reference nutrient intake (LRNI), estimated average requirement (EAR), reference nutrient intake (RNI) and safe intake².

Recommended Nutrient Intake (RNI) is the average amount of the nutrient that is enough, or more than enough, for about 97% of people in a group².

Energy or calories?

FSA guidance on food labelling requirements⁶ states that energy must be expressed in both kiloJoules (kJ) and kilocalories (kcal). To minimise consumer confusion, the GDA for energy is described instead in the more consumer friendly term 'calories' although ideally it should be 'energy in kcal or kJ'.

1. IGD Working Group Report. Report of the IGD/PIC Industry Nutrition Strategy Group Technical Working Group on Guideline Daily Amounts (GDAs) Watford, UK. IGD. 2005.
2. Department of Health. Dietary Reference Values for Food, Energy and Nutrients for the United Kingdom, Report on Health and Social Subjects No. 41. London: HMSO, 1991.
3. MAFF/JFSSG (1999) Letter from Rosemary Hignett to Industry entitled 'Definition and determination of dietary fibre for nutrition labelling'.
4. Scientific Advisory Committee on Nutrition (2003) Salt and Health. London: TSO. Published for the Food Standards Agency and Department of Health.
5. BNF <http://www.nutrition.org.uk/home.asp?siteId=43§ionId=44&parentSection=320&which=1>.
6. FSA <http://www.food.gov.uk/multimedia/pdfs/nutlabel2.pdf>
7. WHO http://www.who.int/hpr/nph/docs/who_fao_expert_report.pdf
8. Eurodiet <http://eurodiet.med.uoc.gr/first.html>
9. Scientific Opinion of the Panel on Dietetic products, Nutrition and Allergies on a request from European Commission on the review of labelling reference intake values for selected nutritional elements. The EFSA Journal (2009) 1008, 1-14.
10. European Commission Council Directive No 90/496/EEC of 24 September 1990 on nutrition labelling for foodstuffs. Official Journal 6.10.1990.
11. Department of Health (1989) Dietary sugars and human disease. Report on the Panel on Dietary Sugars of the Committee on Medical Aspects of Food Policy (COMA). Report No. 37. HMSO, London
12. Rayner M, Scarborough P & Williams C (2003). Public Health Nutrition 7 4:549 – 556.
13. Rayner M, Scarborough P & Williams C (2003). The origin of Guideline Daily Amounts and the Food Standards Agency's guidance on what counts as 'a lot' and 'a little' Public Health Nutrition 7 (4) 549 - 556.

Calories/energy

Men	Women
2500 kcal/day	2000 kcal/day
<ul style="list-style-type: none"> Based on the Estimated Average Requirement (EAR) for energy set out in the COMA report on Dietary Reference Values 1991² The EARs for 19-50 year olds are 1940 kcal/day for women and 2550 kcal/day for men The 1998 IGD values rounded figures to 2000 kcal/day for women and to 2500 kcal/day for men Academic experts in energy metabolism were consulted and agreed that the 1998 IGD figures were still applicable The GDA for calories/energy is an average target guideline 	

Fat and saturated fat

	Men	Women
Fat	95g	70g
Saturated fat	30g	20g
<ul style="list-style-type: none"> Based on the COMA report on Dietary Reference Values for energy (described above) 1991² and the IGD values developed in 1998 Calculated using 33% energy from fat Calculated using 10% energy from saturated fat Grams to energy conversion figure for fat of 9 kcal/g The GDAs for fat and saturated fat are maximum target guidelines 		

Fibre

	Men	Women
NSP	18g	18g
AOAC*	24g	24g
<p><i>*required for labelling purposes</i></p> <ul style="list-style-type: none"> NSP Fibre GDA: Based on the COMA report on Dietary Reference Values in relation to Non Starch Polysaccharides (NSP), based on the Englyst method of analysis² COMA recommended² that an intake of 18g dietary fibre was needed to result in a healthy bowel habit (i.e. a daily faecal weight of at least 100g/day), with identical levels for men and women, since there is no sex difference in what is considered a healthy faecal weight and intake is independent of energy intake AOAC Fibre GDA: Based on the Association Dedicated to Excellence in Analytical Methods (AOAC) method of analysis of fibre, in line with FSA recommendation on fibre analysis³, also the methodology used for labelling purposes throughout Europe The AOAC method for fibre content in foods tends to result in fibre values being approximately one third higher than those obtained using Englyst NSP values⁶. Hence the AOAC value of 24g was recommended by the IGD technical group as a suitable GDA for fibre The GDA for fibre is a minimum amount 		

All information is adapted from the IGD Working Group Report¹ unless otherwise stated.

Salt/sodium

	Men	Women
Salt	6.0g	6.0g
Sodium*	2.4g	2.4g
<p><i>*required for labelling purposes</i></p> <ul style="list-style-type: none"> Salt: developed in line with the recommendations of SACN Report on Salt and Health (2004)⁴ Sodium: based on the RNI for sodium multiplied by 1.5 (i.e. 2.4 x 1.5) in line with the rationale for the calculation of the SACN salt values. Developed to comply with EU labelling rules¹⁰ The GDAs for sodium and salt are maximum target values 		

Total sugars

	Men	Women
Total carbohydrate	300g	230g
(Total sugars*)	120g	90g
(NMES)	65g	50g
<p><i>*required for labelling purposes</i></p> <ul style="list-style-type: none"> The GDA for total carbohydrates was based on COMA recommendations for total energy intake² (including alcohol) and calculated using 47% energy from carbohydrate The GDA for non-milk extrinsic sugars (NMES) is based on the COMA 1991 DRV² and the COMA 1989 Dietary sugars and human disease report¹¹ and was calculated using 10% energy from NMES The GDA for total sugars was developed using calculations as described* by Rayner et al 2003¹². This GDA is consistent with dietary recommendations for consuming 5-A-Day fruit and vegetables, three portions of dairy products and limiting added sugar intake to 10% of total energy. The 90g value for women and 120g value for men was developed to include intrinsic and milk sugars from some dairy products, fruit-based products and muesli, potato products and bread The GDA for total sugars was developed to satisfy EU labelling law¹⁰, which requires that total sugars be calculated and displayed and was calculated using 19% energy from total sugars Estimates of total sugars, non milk extrinsic sugars, non-milk intrinsic sugars and milk sugars are derived from the National Diet and Nutrition Survey for Adults and are 20%, 13% 5% and 2% food energy respectively Grams to energy conversion figure for carbohydrates of 4 kcal/g The GDA for carbohydrate is a minimum target guideline The GDA total sugar is an average target guideline The GDA for NMES is a maximum target guideline <p><i>*Rayner and colleagues calculated that the population average intake for total sugars should be approx 20% food energy intake (i.e. 11% NMES + 7% intrinsic sugars + 2% milk sugar).</i></p>		

One set of adult values

To discourage over-consumption, particularly amongst those with low energy requirements, it was agreed that the GDA values currently used for women be used as the "All Adults" figure. This also prevents the confusion of employing a new set of values based on the average GDA between males and females.