# Creating Eating Well photo resources

A practical guide

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First Steps Nutrition Trust, 2012

ISBN 978-1-908924-04-9

Designed by Bravedesign

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**First Steps Nutrition Trust** is a charity that is a focal point for objective, evidence-based information and resources about the importance of good nutrition from pre-conception to 5 years.

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Thank you to Arabella Hayter, Rosie Leyden and Helena Little for additional work in preparing this guide.

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## Introduction

### What does this practical guide do?

This resource outlines how the *Eating Well* practical photo resources are put together. The *Eating Well* practical guides show the sorts of meals and snacks, and amounts, which meet current average energy and nutrient guidelines in the UK for specific population groups. The *Eating Well* practical photo resources were originally conceived and designed by Helen Crawley at The Caroline Walker Trust, and resources were put together for infants, children aged 1-4 years, 5-11 years and 12-18 years, adults with learning disabilities, and older people and older people with dementia.

These resources can be accessed at www.cwt.org.uk.

### Who is the guide for?

This guide aims to support others to produce their own practical food photo resources. It is designed for dietitians and registered public health nutritionists who know how to work with dietary reference values, food composition data, recipe analysis and practical nutrition guidelines for population groups.

#### What does it contain?

The guide outlines how the resources are put together in a stepwise plan:

- 1 Selecting a population group and calculating energy and nutrient requirements
- 2 Planning a 7-day menu
- 3 Selecting portion sizes and food types
- 4 Putting together a menu plan
- 5 Analysing a menu plan
- 6 Testing recipes
- 7 Photographing meals and snacks
- 8 Finalising the menu plans and photos
- 9 Creating a resource



# 1 Selecting a population group and calculating energy and nutrient requirements

In the UK, energy and nutrient requirements are compiled by the Scientific Advisory Committee on Nutrition (SACN). They are based on the best estimates of amounts of energy and nutrients that meet the needs of average population groups by age and gender.

#### **Energy**

Estimates of average requirements (EAR) for energy across the population were recently revised by SACN (SACN, 2011) and these provide the basis for all current menu planning. Estimates are given for population groups by age and gender at a range of energy expenditures. It is important to consider whether you will use an average figure for energy or whether you are creating resources to meet a range of needs. For some population groups, averages are most appropriate, while for others it may be necessary to create eating plans which are more flexible. It is important to ensure the energy values used are clearly described, as the energy values form the basis of all menu planning decisions and determine the amounts of other macronutrients.

#### **Nutrients**

Current nutrient requirement data are found in the 1991 Department of Health publication *Dietary Reference Values for Food Energy and Nutrients in the UK* (Department of Health, 1991). Additional information about salt is found in the report *Salt and Health* (SACN, 2003). Other new data may appear in specific SACN reports and it is useful to keep abreast of current reports to ensure that the latest data are being used. Guidance on how much fruit and vegetables to eat, fish intakes and other food-based dietary recommendations may also be relevant to particular population groups and should be considered when menu planning. There are also maximum levels of nutrients for particular population groups to consider which may be relevant in some cases.

The reference nutrient intake (RNI) is the figure used for menu planning for population groups. Using the RNI should ensure that you are meeting the needs of almost everyone in the population. Where groups are mixed by gender, we generally use the higher RNI figure as the target average for the group. For example, in a mixed group of teenagers the RNI for girls for iron would be used and the RNI for zinc for boys to ensure that those with the highest needs for each of these minerals were covered.

The nutrients included in the menu analysis will depend on the population group, the issues of concern for that population group, and the quality of the data available for that nutrient in the nutrient analysis database you plan to use. It is not necessary to cover all nutrients for which there is a dietary reference value, as some are unlikely to be in short supply in the diet. The nutrients used in menu planning are shown in the *Eating Well* resources and are typically energy, macronutrients, fibre, iron, zinc, calcium, sodium, vitamin A, vitamin C and folic acid. In some cases other B vitamins, vitamin D and iodine are included.

Depending on which population group you are designing resources for, it may be possible to use energy and nutrient figures that have already been derived for population groups by age and gender. However, if the age group you are planning meals for is not the same as the standard age bands covered by SACN, you may need to re-calculate values. In this case you can calculate derived energy and nutrient values suitable for your own use. For example, the report *Eating Well at School* (which can be accessed at <a href="https://www.cwt.org.uk">www.cwt.org.uk</a>) explains how nutrient values were derived for schoolchildren aged 5-11 years from the standard figures given for children aged 4-6 years, 7-10 years and 11-14 years.

A summary of the derived energy and nutrient values that were used to put together the menu plans is included in the *Eating Well* photo resources. In any resource produced, it is important to state clearly the figures the menus are planned against and how they were derived.

## 2 Planning a 7-day menu

## Why plan a 7-day menu?

Dietary reference values are designed as averages for population groups over a period of time and the aim is not to achieve those intakes on a daily basis. As some nutrients are concentrated in particular foods and to ensure a variety of foods are consumed at meals and snacks, it makes sense to design menu plans over a period of a week in the first instance. The aim is to meet the nutritional guidance using a realistic variety of foods over the time period in appropriate meals and snacks for that population group, rather than to meet the guidance at any cost by using unusual ingredients or strange amounts of foods on some days.

### What about offering choices?

Some menu plans offer a choice of meals at main courses and this can be useful to increase the range of meals that can be photographed. However, it is important to consider menu plans for some dietary choices separately to ensure that needs are met – for example, to see what happens if someone always chooses the vegetarian option. The *Eating Well* resources done to date created a minimum of three weeks' worth of menus: one a standard omnivorous menu, one a vegetarian menu and one using world menu options, so that a variety of eating patterns and meal choices could be shown to meet energy and nutrient recommendations, rather than a pooled sample of meals from each.

## **Energy and nutrients across the day**

Depending on the types of menus you are devising, it is often useful to try and ensure that energy and nutrients are spread evenly across the day. This is particularly important when you are planning meals and snacks for settings such as schools and early years where you want all those eating a particular meal or snack to obtain a certain proportion of energy and nutrients.

For example, in some of the *Eating Well* resources we have broken down energy and nutrients across the day like this:

| Breakfast =  |                  | 20%  |
|--|------------------|------|
| Lunch (main meal with desse                          | rt) =            | 30%  |
| Tea (light meal with dessert) =                      | =                | 20%  |
| Snacks (morning snack, after snack and supper) = 10% | noon<br>6 each = | 30%  |
|  | Total =          | 100% |

On the next page is an example of how derived energy and nutrient values can be divided up across the day for children aged 3-4 years. This is the sort of calculation that could underpin menu planning for early years settings, for example.

**EXAMPLE**: Energy and nutrient recommendations (and breakdown) across the day for children aged 3-4 years (average for boys and girls aged 3-4 years)

| Nutrient                             | Whole | Whole                     | Morning | Afternoon | Breakfast | Lunch  | Lunch          | Lunch | Tea    | Tea   | Tea   | Snacks        |
|--------------------------------------|-------|---------------------------|---------|-----------|-----------|--------|----------------|-------|--------|-------|-------|---------------|
|                                      |       | day care<br>90%<br>target | (40%)   | (30%)     | target    | target | dessert<br>20% | 10%   | target |       | (5%)  | 10%<br>target |
| Energy (kcal)                        | 1230  | 1107                      | 492     | 369       | 246       | 369    | 246            | 123   | 246    | 185   | 62    | 123           |
| Fat (g)                              | 48    | 43.2                      | 19.2    | 14.4      | 9.6       | 14.4   | 9.6            | 4.8   | 9.6    | 7.2   | 2.4   | 4.8           |
| Saturated fatty acids (g)            | 15    | 13.5                      | 6       | 4.5       | 3         | 4.5    | 3              | 1.5   | သ      | 2.25  | 0.75  | 1.5           |
| Carbohydrates (g)                    | 164.0 | 147.6                     | 65.6    | 49.2      | 32.8      | 49.2   | 32.8           | 16.4  | 32.8   | 24.6  | 8.2   | 16.4          |
| NME sugars (g)                       | 36    | 32.4                      | 14.4    | 8.01      | 7.2       | 8.01   | 7.2            | 3.6   | 7.2    | 5.4   | 1.8   | 3.6           |
| Protein (g)                          | 17.1  | 15.39                     | 6.84    | 5.13      | 3.42      | 5.13   | 3.42           | 1.71  | 3.42   | 2.565 | 0.855 | 1.71          |
| Fibre (g)                            | 8     | 7.2                       | 3.2     | 2.4       | 1.6       | 2.4    | 1.6            | 0.8   | 1.6    | 1.2   | 0.4   | 0.8           |
| Vitamin A (retinol equivalents) (µg) | 450   | 405                       | 180     | 135       | 90        | 135    | 90             | 45    | 90     | 67.5  | 22.5  | 45            |
| Folate (µg)                          | 85    | 76.5                      | 34      | 25.5      | 17        | 25.5   | 17             | 8.5   | 17     | 12.75 | 4.25  | 8.5           |
| Vitamin C (mg)                       | 30    | 27                        | 12      | 9         | 6         | 9      | 6              | 3     | 6      | 4.5   | 1.5   | 3             |
| Thiamin (mg)                         | 0.6   | 0.54                      | 0.24    | 0.18      | 0.12      | 0.18   | 0.12           | 0.06  | 0.12   | 0.09  | 0.03  | 0.06          |
| Riboflavin (mg)                      | 0.7   | 0.63                      | 0.28    | 0.21      | 0.14      | 0.21   | 0.14           | 0.07  | 0.14   | 0.105 | 0.035 | 0.07          |
| Vitamin D (µg)                       | 7     | 6.3                       | 2.8     | 2.1       | 1.4       | 2.1    | 1.4            | 0.7   | 1.4    | 1.05  | 0.35  | 0.7           |
| lodine (µg)                          | 85    | 76.5                      | 34      | 25.5      | 17        | 25.5   | 17             | 8.5   | 17     | 12.75 | 4.25  | 8.5           |
| Iron (mg)                            | 6.7   | 6.03                      | 2.68    | 2.01      | 1.34      | 2.01   | 1.34           | 0.67  | 1.34   | 1.005 | 0.335 | 0.67          |
| Calcium (mg)                         | 400   | 360                       | 160     | 120       | 80        | 120    | 80             | 40    | 80     | 60    | 20    | 40            |
| Zinc (mg)                            | 5.8   | 5.22                      | 2.32    | 1.74      | 1.16      | 1.74   | 1.16           | 0.58  | 1.16   | 0.87  | 0.29  | 0.58          |
| Sodium (mg)                          | 1000  | 900                       | 400     | 300       | 200       | 300    | 200            | 100   | 200    | 150   | 50    | 100           |

# 3 Selecting portion sizes and food types

Once you have a set of recommendations for the menu plans (as described in section 2), you can devise a menu plan with details of actual meals and snacks that can be analysed and photographed for your resource. But first it can be useful to decide on the food types and portion sizes that you will use in your menu plan, and to create a menu plan outline that describes the sorts of foods and amounts of foods (portion sizes) in more detail. The next pages show an example of the decisions that might be made when creating menu plans for 3-4 year olds (page 10) and an example outline menu plan for that age group (page 11).



**EXAMPLE**: Portion sizes and food types for 3-4 year olds – a framework for the menu plan

| Food<br>group   | Recommended servings per day   | What is an average portion for 3-4 year olds?  | Are there any national guidelines to follow?  Current guidance for early years settings in England on foods to limit or avoid (School Food Trust 2012)  |
|---|--|--|---|
| Bread, rice,<br>potatoes,<br>pasta<br>and other<br>starchy<br>foods                     | 5-6 portions per<br>day  | 80g rice/pasta/potatoes/<br>couscous<br>20g bread (low-sodium)<br>15g-20g cereal (low-sugar)<br>10g popcorn (plain)<br>8g breadsticks/cracker/rice<br>cakes (low-sodium)   | Fried potatoes/rice – limit to one serving per week.  |
| Meat, fish, eggs and beans and other non-dairy sources of protein and meat alternatives | 2 portions per day  2-3 portions per day for vegetarian and vegan diets  Serve as part of lunch or tea  Serve as a snack 1-2 times per week  Serve 1 meat-free meal per week | 30g-40g cooked beef/lamb<br>30g-40g chicken/turkey<br>35g-45g cooked fish/seafood<br>50g egg<br>40g Quorn/tofu/soya granules<br>40g-50g pulses or legumes<br>20g nuts/seeds  | Sausages, burgers, pies/<br>pastry-covered meat or<br>crumb-coated fish/ chicken –<br>limit to one serving per week.  |
| Fruit and vegetables  | 5 portions per day   | 40g fresh fruit 50g-70g stewed/cooked fruit 20g dried fruit 70g tinned fruit in juice 100ml diluted fruit juice (50ml pure unsweetened juice/50ml water) 40g raw/cooked vegetables 60g canned vegetables in juice (eg. tomatoes) | Avoid fruit canned in syrup.  Serve canned or dried fruit as part of a meal rather than as a snack.  Choose low-sodium/reduced-sugar canned vegetables.  Avoid canned vegetables in salted water/brine. |
| Milk and<br>dairy<br>foods and<br>non-dairy<br>alternatives                             | 3 portions per day   | 100ml full-fat milk 60g full-fat yoghurt 60g custard 80g milk-based pudding (eg. semolina) 15g-20g hard cheese 20g-30g soft cheese 100ml calcium-fortified soya milk   | Ice cream – limit to one serving per week.  Avoid low-fat products.  Avoid sweetened products.  |

## **EXAMPLE:** Basic menu plan outline for 3-4 year olds

| Breakfast<br>20% energy<br>(246kcal)  | Cereal (15g-20g) with full-fat milk (100ml) and Starchy carbohydrates (20g) with spread (4g) or fruit (40g-80g)/dried fruit (20g)  Or  Hot breakfast – for example, boiled egg (50g), toast (20g), tomatoes (60g)  |  |  |  |  |
|---|--|--|--|--|--|
|   | Diluted fruit juice (100ml)  |  |  |  |  |
| Morning<br>snack<br>10% (123kcal)   | Milk drink with fruit  |  |  |  |  |
| Lunch<br>20% (246kcal)<br>with dessert<br>10% (123kcal)<br>Total = 30%<br>(369kcal) | Main meal (served with water or diluted fruit juice):  Starchy carbohydrates – rice, pasta, potatoes (80g) Additional bread/rolls (15g-30g)  Protein – meat, fish, eggs, legumes (30g-50g) Protein in sauces (90g-120g)  Composite dishes – pasta bake/risotto (150g-180g)  Vegetables and salads (40g-80g)  Dessert (pudding-type): Milk-based puddings (made with full-fat milk (80g-90g) Cakes/buns (30g-50g) Custard (60g) | Offer variation across the week, eg.:  Main meal carbohydrates: Monday – rice Tuesday – new potatoes Wednesday – pasta  Main meal protein: Monday – fish Tuesday – lamb Wednesday – eggs etc.  Dessert: Monday – carrot cake Tuesday – stewed fruit with custard Wednesday – rice pudding  |  |  |  |
| Afternoon<br>snack<br>10% (123kcal)   | Carbohydrate snack with vegetable  |  |  |  |  |
| Tea<br>15% (185kcal)<br>with dessert<br>5% (62kcal)<br>Total = 20%<br>(246kcal)     | Meal (served with water): Starchy carbohydrates (60g-80g) Breads and rolls (20g-40g) Protein (30g-40g) Protein in sauces (80g-100g) Composite dishes (120g-150g) Vegetables and salads (40g-80g)  Dessert: Fruit salads (100g) Baked fruit (40g-80g) Stewed fruit/compôtes (50g-70g) Canned fruit in juice (70g) Full-fat yoghurt (60g)  | Offer variation across the week, eg.:  Main meal carbohydrates: Monday – bread/sandwich Tuesday – couscous Wednesday – sweet potato wedges  Main meal protein: Monday – egg Tuesday – chicken Wednesday – legumes/pulses  Dessert: Monday – fruit salad Tuesday – baked apple with raisins Wednesday – tinned fruit with yoghurt |  |  |  |
| Evening<br>10% (123kcal)  | Milk drink   |  |  |  |  |

## 4 Putting together a menu plan

Once you have put together an outline menu plan (as described in section 3), you need to select meals and snacks for which nutritional composition data are available. You will need to select menu planning software that contains relevant foods and recipes and their nutritional content and which allows you to add your own specific data.

We recommend bespoke menu planning software produced by Nutmeg (www.nutmeg.co.uk) that you can customise to meet your own needs. See section 5 *Analysing a menu plan* for an explanation of why we recommend this software.

When you are putting the menu plan together, you need to think about the types of foods and the composition of meals and snacks that you will then go on to make and photograph. This can take some time as it is important to ensure that, across the week:

- A good variety of foods, meals and snacks is provided.
- The food is appropriate to the population group and fits in with any other current guidance on foods to limit, avoid or promote.
- The menu is varied in taste, colour and texture.
- Recipes are available for all the dishes that you plan to include so that they can be tested before you finalise the resource.
- Portion sizes suggested are reasonable.
- Any other criteria have been met for example, that individual meals meet a certain proportion of energy and nutrients across a week.

An example 5-day menu plan for 1-4 year olds, which could be used in child care settings, is shown on the next page.



## **EXAMPLE:** Menu plan for 1-4 year olds:

|                                    | Monday   | Tuesday  | Wednesday  | Thursday   | Friday  |
|------------------------------------|--|--|--|--|---|
| Breakfast<br>eg. at 8am            | Scrambled egg<br>50g<br>Cherry tomatoes<br>10g<br>Toast 20g<br>Vegetable fat<br>spread 4g<br>Diluted orange<br>juice (50%) 100ml | Crisped rice 20g<br>Milk 100ml<br>Malt loaf 40g<br>Diluted orange<br>juice (50%) 100ml                   | Cornflakes 20g<br>Raisins 10g<br>Milk 100ml<br>Sliced banana 80g<br>Diluted orange<br>juice (50%) 100ml  | Porridge 100g<br>Prunes (dried) 20g<br>Fruit bun 30g<br>Diluted orange<br>juice (50%) 100ml                            | Baked beans 60g<br>Toasted muffin 30g<br>Vegetable fat<br>spread 4g<br>Diluted orange<br>juice (50%) 100ml  |
| Morning<br>snack<br>eg. at<br>10am | Peaches (canned<br>in juice) 70g<br>Full-fat yoghurt<br>60g<br>Milk 100ml  | Tabbouleh 40g<br>Raisins 30g<br>Cherry tomatoes<br>40g<br>Milk 100ml                                     | Fruit scone 30g<br>Vegetable fat<br>spread 3g<br>Strawberries 40g<br>Milk 100ml  | Mixed platter:<br>Red pepper 20g<br>Celery 20g<br>Grapes 40g<br>Milk 100ml   | Pancake 25g<br>Butter 4g<br>Apple 40g<br>Milk 100ml   |
| Lunch<br>eg. at 12-<br>1pm         | Chicken korma<br>90g<br>Brown rice 80g<br>Naan bread 20g<br>Carrot cake 40g<br>Diluted orange<br>juice (50%) 100ml               | Lamb burger 45g Bubble and squeak 120g  Dates 45g Full-fat yoghurt 60g  Diluted orange juice (50%) 100ml | Tuna and sweetcorn pasta 140g Cucumber 20g and red pepper sticks 20g Orange jelly 100g Mandarins (in juice) 70g Diluted orange juice (50%) 100ml | Vegetable lasagna<br>180g<br>Mixed salad 40g<br>Stewed apple 70g<br>Custard 60g<br>Diluted orange<br>juice (50%) 100ml | Chilli con carne 95g Jacket potato 90g Creme fraîche 20g Tomato 40g Watercress 10g  Rhubarb crumble 60g Custard 50g  Diluted orange juice (50%) 100ml |
| Afternoon<br>snack<br>eg. at 3pm   | Popcorn 10g<br>Pears 40g<br>Milk 100ml   | Pitta bread 25g<br>Houmous 30g<br>Cucumber 20g<br>and carrot sticks<br>20g<br>Milk 100ml                 | Plain yoghurt 60g<br>Banana 40g<br>Milk 100ml  | Spicy potato<br>wedges 65g<br>Mozzarella balls<br>20g<br>Orange wedges<br>40g<br>Milk 100ml                            | Mixed platter:<br>Yellow pepper 20g<br>Cherry tomato 20g<br>Grapes 40g<br>Milk 100ml  |
| <b>Tea</b><br>eg. at 5pm           | Creole jambalaya<br>120g<br>Carrot sticks 40g<br>Pitta bread<br>Banana custard<br>100g<br>Diluted orange<br>juice (50%) 100ml    | Savoury omelette 70g Baby jacket potatoes 80g Fresh fruit salad 100g Diluted orange juice (50%) 100ml    | Baked beans 60g<br>White toast 20g<br>Cucumber 40g<br>Rice pudding 80g<br>Sultanas 40g<br>Diluted orange<br>juice (50%) 100ml                    | Chicken and<br>vegetable<br>couscous 145g<br>Mixed salad 25g<br>Fruit jelly 60g<br>Diluted orange<br>juice (50%) 100ml | Sardines 40g Wholemeal toast 20g Cherry tomatoes 40g Semolina 90g Pears 40g Diluted orange juice (50%) 100ml  |

## 5 Analysing a menu plan

Once you have produced a draft menu plan, it needs to be analysed against the energy and nutrient requirement figures.

The quality of the analysis will depend on the nutrient database used, and in order for this to provide as good an estimate as possible of the energy and nutrients provided by the meals and snacks in the menu plan, it is important that the database:

- does not have any missing nutrient data
- performs recipe analysis which allows for changes in composition, particularly moisture loss or gain on cooking, and
- contains the most relevant nutrient data for foods used and allows the input of more appropriate data for specific foods by type or brand – for example, fortified foods.

The Nutmeg menu planning software was designed with dietitians and registered nutritionists to offer a comprehensive and detailed basic database that can be added to, and many recipes available with the software were selected and analysed carefully by dietitians.

There are a lot of average figures and generalisations in dietary analysis work, so there has to be pragmatism in analysis. The aim is to ensure that, as far as possible, requirements are met over a period of a week or more from a variety of foods. You can set 10% plus or minus boundaries to allow for variations and errors in nutrients to allow some flexibility in the menu plan. You may decide to allow bigger error margins for some nutrients that are harder to achieve. For example, it can be very difficult to achieve sodium targets, as much of the sodium appears in foods that are bought ready-made, such as bread and cereals. Until sodium is reduced in the food supply it may be necessary to allow a wider margin of acceptance and this can be adapted as salt targets are met.

It will often take a number of attempts to compile a menu plan which meets the energy and nutrient requirements of the group. Once this has been achieved, the next step is to test that the recipes used work and taste good, that they make up the correct size portions used in the menu plan, and that the portion sizes are appropriate in real life.



## 6 Testing recipes

It is important that the suggestions you make for meals and snacks are realistic. If you are going to make up recipes to be photographed, this is a good time to check that they work. Many of the recipes included in food and nutrient databases have been created theoretically and many don't work, don't create the portion size suggested or need more or less fluid added – which can have a substantial impact on the nutrient density of the dish.

All of the recipes suggested in the *Eating Well* resources have been tested and adapted where necessary. The method we use is given below.

#### 1 Decide how many servings your recipe will make.

Recipes may be designed for serving any number of people depending on the setting – for example, 2, 4, 6, 12 or more people. When testing a recipe you don't need to make up a large batch in all cases. It is often possible to prepare a smaller amount, although this won't always work if it is a cake or dish that requires a certain mass to work. You may need to reduce cooking times or temperatures slightly for smaller amounts. Make notes of any changes to your ingredients/method as you go along.

## 2 Convert all the amounts in the recipe to grams, so that you can check weights as you go along.

Many recipes have a combination of weights of ingredients in grams and amounts in household measures or numbers (eg. a medium-sized carrot, or a tablespoon of oil). For analysis purposes the weight of all recipe ingredients must be known and it is useful to have a simple guide to portion sizes to help with this. Some items may need to be weighed or measured and issues such as drained weights and inedible waste need to be considered for some ingredients. Information on inedible waste for many foods can be found in the standard food composition tables.

#### 3 Weigh everything as you go along.

You will need to weigh all the raw ingredients and also the finished dish to be able to calculate moisture loss and portion size. It is useful to weigh the whole dish before and after cooking as well as weighing the ingredients as you make up the dish.



#### 4 Did the recipe work?

Record any problems with the recipes and any changes you made, such as adding more liquid or changing the cooking time. If the recipe does not work well in practice, you may need to adapt it or replace it with a recipe for a different dish in your menu plan.

#### 5 What does a portion look like?

Once the recipe has been made successfully and a portion size weighed, see what it looks like on one of the plates you will be using. You may need to alter the portion size and this will impact on the overall analysis. Often this happens at the photography session, as the impact of portion size may not be known until you have all the items for the meal together and are ready to take the photo.

## 7 Photographing meals and snacks

You can take good food photos with a simple digital camera. All the food photographs in the *Eating Well* resources were taken in daylight with a simple handheld digital camera and without any additional equipment.

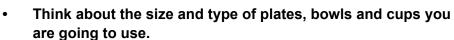
There are some things to think about:

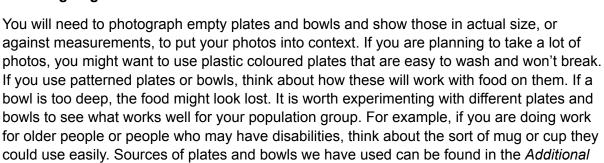
• Do you need to set up each shot with the correct background, cutlery, glass etc., or will you be able to make changes to the photos at a later stage, using photograph software?

In the original resources, the foods were all photographed on a specific background, but in the newer versions the foods are photographed on blank backgrounds and other details are added afterwards, using photograph software. Both methods work equally well. Good backgrounds to choose are plain pieces of paper or card that you can replace if food is spilt and that don't overpower the plates of food or become confused with patterns.

What angle will you take your photos from?

All the other photos are taken standing over a meal or dish which is placed on a sheet of paper or card on the floor. Photos need to look consistent, so experiment with how you can do this and get a similar look for all the photos. You can manipulate photos to make sure plates are all the same size when you download the photos.





information section at the end of this guide.

If you use metal cutlery you may need to try and avoid getting the reflection of the photographer and camera on the metal surface, or to alter the photo to take out any reflections. Make the food look attractive but real.

The aim of the photos we have taken for the *Eating Well* resources is to make food look real and as it might be made and served at home or in settings. We want it to look attractive and tasty but we have not used any of the tricks commonly used in food photography to enhance its appearance. The only exception to this is gravy – which does not show up well on a photo unless you thicken and darken it. However, some foods are much harder to photograph than others, and you have to try different ways of displaying food to ensure that it is clear what it is and how much of it you have.

## Organising your photoshoot

• Group together foods that will be photographed on the same day, to help with shopping and to help keep costs down.

For example, you may want to do all of the breakfasts and snacks on the same day so that you can use items like fruit, vegetables or bread in more than one photo. The amount of photos you can do will vary depending on how much food you need to prepare and cook. If you are well organised you can take about 20-35 photos of meals per day.



Make a shopping list for each photo session.

You will need to carefully plan all the foods and drinks you need for the photo session. Think about storage facilities like freezers and cooking equipment, as well as the time you have. It is likely some dishes will need to be made up in advance as it is tricky to prepare everything on the spot when a lot of weighing is required.

Make a plan for cooking and displaying your meals.

Decide which meals need to be cooked in advance and which meals can be quickly prepared on the day of the photo session. It is useful to have another pair of hands in the kitchen as you have to prepare food, weigh it, record what you are doing and photograph it. It is important that you have a list of the meals and snacks you plan to prepare, with details of the weights suggested in your menu plan. As you go through the session you can then record any changes onto this list, as you will need this information to make any subsequent changes to your menu plan. It can work well to have one person cooking, one person weighing, styling and recording, and one person arranging and taking the photographs.



Make a master plan for the day.

You will need an outline plan of all the food photos you plan to do in the day or session. It is good to have a systematic plan for the day which allows for preparation time and re-uses food effectively to minimise waste.

# 8 Finalising the menu plans and photos

After the photoshoot you will probably have to make some changes to your menu plan, as some of the weights may have changed and you might have to re-analyse some recipes if it turns out that the portion sizes made, moisture content etc. are different to what was expected. This can sometimes mean adding additional ingredients and changing weights of meals and snacks, and often a 'mop-up' photo session is needed to take new photos of dishes where changes have had to be made to recipes. Creating practical photo resources is an iterative process, but you learn a lot about food composition, food portion sizes and weights of food in doing it, which can be invaluable when supporting people to eat better.

At the end of the process you will have a selection of meal and snack ideas for your population group which demonstrate how average energy and nutrient needs can be met over a period of time, if a range of dishes are consumed.

## 9 Creating a resource

When you produce your resource, it is important that you label the photos of meals and snacks clearly and provide portion sizes and recipes. In order to make sure that the purpose of your resource is clear, you might want to put the photos in a pack with some information explaining who they are for and how they can be used, and with photos of the empty plates and bowls so that portion sizes can be understood.

Recipes need to be presented clearly. Once we have tested a recipe after its conversion to weights in grams, we then re-convert it to a more traditional recipe format using some household measures and numbers. When writing recipes, follow a template so that it is easy for people to follow them. (See the recipes in any of the *Eating Well* resources.) For each recipe, list the ingredients in the order in which they will be used, and check that all the ingredients are mentioned in the recipe instructions. Writing good recipes is not as easy as it sounds, and it is useful to work with an editor or home economist who can check you have got these right.

## Additional information

## **Nutritional analysis software**

#### Nutmeg

For menu planning software.

Website: www.nutmeg-uk.com

Phone: 020 8323 8001

Email: office@nutmeg-uk.com

## Sources of crockery and cutlery

The plates, bowls and cups used in most of the *Eating Well* photo sessions are coloured melamine. The side plate and dinner plates are in standard sizes, a variety of bowls are available and you can see the sizes of bowls we use in the resources. Some of the earlier photos used IKEA children's plates, bowls and cups. Coloured melamine crockery can be purchased in a number of outlets. The ones we used were from RICE, a Danish fair trade company, and you can find stockists for this brand via the internet. The large spotty plates we use in some of the resources are also standard dinner plate size, and these plates are from TG Green Cornishware in blue domino design. Glasses used were from IKEA.

The cutlery with coloured handles we used was standard cutlery size and was from Cath Kidston. The children's cutlery was from Viners' children's range.

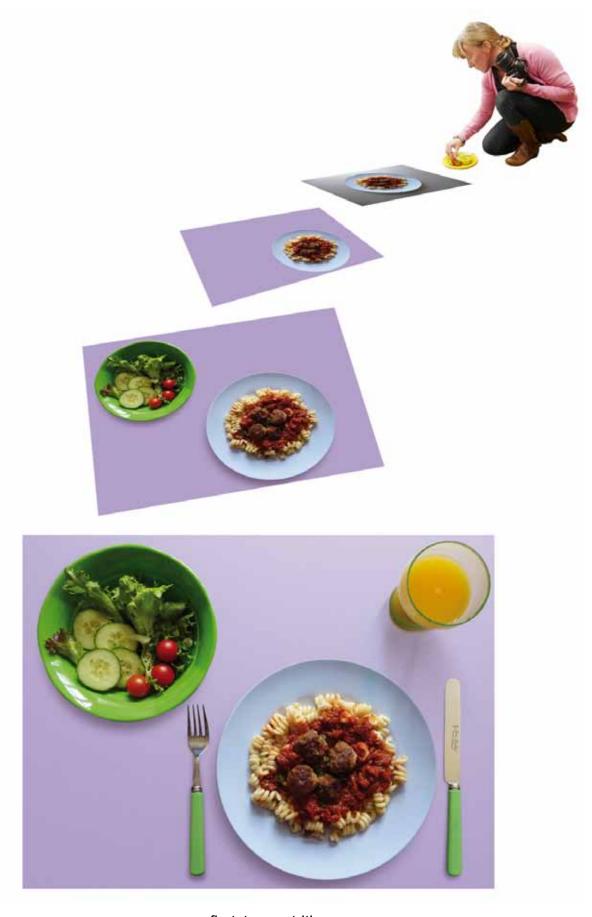
## References

Department of Health. 1991. *Dietary Reference Values for Food Energy and Nutrients in the UK*. London: Department of Health.

School Food Trust, 2012. *Eat Better, Start Better. Voluntary Food and Drink Guidelines for Early Years Settings in England. A Practical Guide*. London: School Food Trust.

Scientific Advisory Committee on Nutrition. 2003. Salt and Health. London: TSO.

Scientific Advisory Committee on Nutrition. 2011. *Dietary Reference Values for Energy*. London: TSO.



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