chat
Healthy conversations from pregnancy to preschool

Ten Steps for Healthy Pregnancy

Steps to help women achieve optimum health for themselves and their baby during pregnancy and beyond

INFANT & TODDLER FORUM

Practical advice for healthy eating habits from pregnancy to preschool

A ‘window of opportunity’

- It is now well accepted that what happens during the very early years of life, and even before birth, influences the later health of the child. For that reason, preconception and pregnancy present a critical ‘window of opportunity’ to improve the health of the next generation
- During pregnancy the maternal diet must provide sufficient nutrients to meet the mother’s usual requirements as well as those of the growing fetus, but in everyday life it can be difficult for women to focus on their own eating habits. Often they may be very busy working or looking after their family and might not have spare time to take good care of themselves
- For around half of the UK adult population, diets are too high in saturated fats and sugar. For some it is also low in essential micronutrients, such as iron, folate and iodine. Modern lifestyles tend to involve less physical exercise and exposure to sunshine than in the past. This contributes to obesity and vitamin D deficiency
- Women are more likely to adopt healthier behaviours if they receive advice from health or childcare professionals, particularly before conception. It is for these reasons that better nutrition guidance in preconception and pregnancy should be considered a public health priority

The facts

- **Health Survey for England 2013**
  - Around 19 per cent of women of childbearing age were classed as obese
  - A further 29 per cent were classed as overweight and would have been so at the start of a pregnancy

- **NICE recommends that**
  - Maternal obesity is best tackled before women become pregnant
  - A pregnant woman with a BMI over 30kg/m^2 should be referred to a dietitian for assessment and advice on healthy eating and exercise

Introduction to the Ten Steps

- The Ten Steps will help equip health and childcare professionals to advise women regardless of their current lifestyle, by providing practical steps that all women can take

- This slide deck contains all of the steps, with supporting information

- Study this resource here before testing yourself with our quiz

TAKE A DAILY SUPPLEMENT

1

of 10µg vitamin D throughout pregnancy and 400µg folic acid up until at least the 12th week of pregnancy. Some women will be prescribed 5mg folic acid per day instead of 400µg

These recommendations are from the Department of Health and NICE to address the higher needs of both vitamins during pregnancy.

The folic acid supplement should begin preconceptually because UK diets are low in folate. A 400mcg daily dose before and up to 12 weeks gestation lowers the infant's risk of neural tube defects such as spina bifida.

The daily 5mg dose is prescribed for women whose infants are at higher risk of neural tube defects i.e. those who:

- Have a neural tube defect or have a family history of neural tube defects
- Have a partner who has a neural tube defect or has a family history of neural tube defects
- Have had a previous baby with a neural tube defect
- Have diabetes
- Are obese

Low folate status in pregnant adolescents has also been found to increase the risk of having a small for gestational age baby.

Maternal vitamin D deficiency increases the risk of vitamin D deficiency in the infant which can cause:

- Hypocalcaemic seizures and cardiomyopathy in very young infants and
- Rickets in older infants and toddlers.

Maternal deficiency also affects the growth and development and one study reported lower bone density at nine years.

10 to 40 per cent of women of child bearing age had low vitamin D status – it is higher in winter and lower in late summer.

Non-caucasian pregnant women with darker skins are even more likely to have low levels of vitamin D.

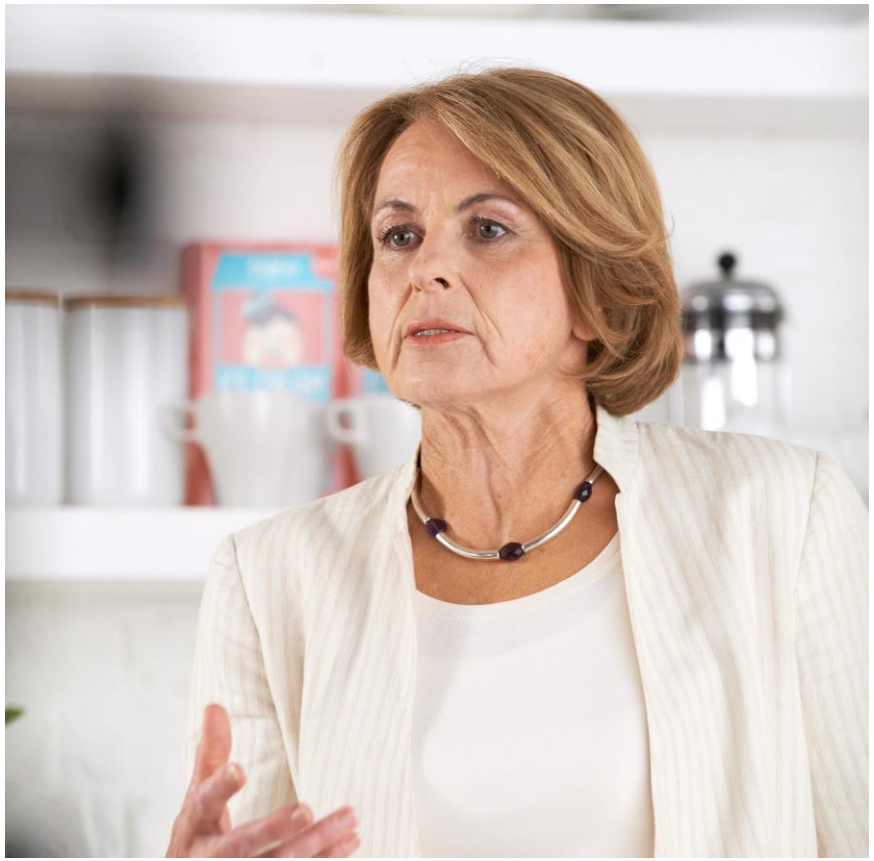
Increasing sun exposure on skin while outside during the UK summer months – April to September – will increase vitamin D levels and stores.

However, current lifestyles, use of sunscreen and modes of dress do not allow adequate vitamin D synthesis in all women.

Oily fish is the only good dietary source of vitamin D as the only other food sources (eggs, meat and some fortified foods) provide very small amounts.

Iron deficiency anaemia can affect the fetal development. Iron supplements are only recommended for women who are low in iron after screening

Watch Judy More, Member of the Infant & Toddler Forum, explain the step further



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2 KEEP PHYSICALLY ACTIVE

throughout pregnancy, aiming for at least 30 minutes of moderate intensity activity on 5 or more days per week

Physical activity during pregnancy maintains fitness and may help prevent excess gestational weight gain and the development of gestational diabetes.

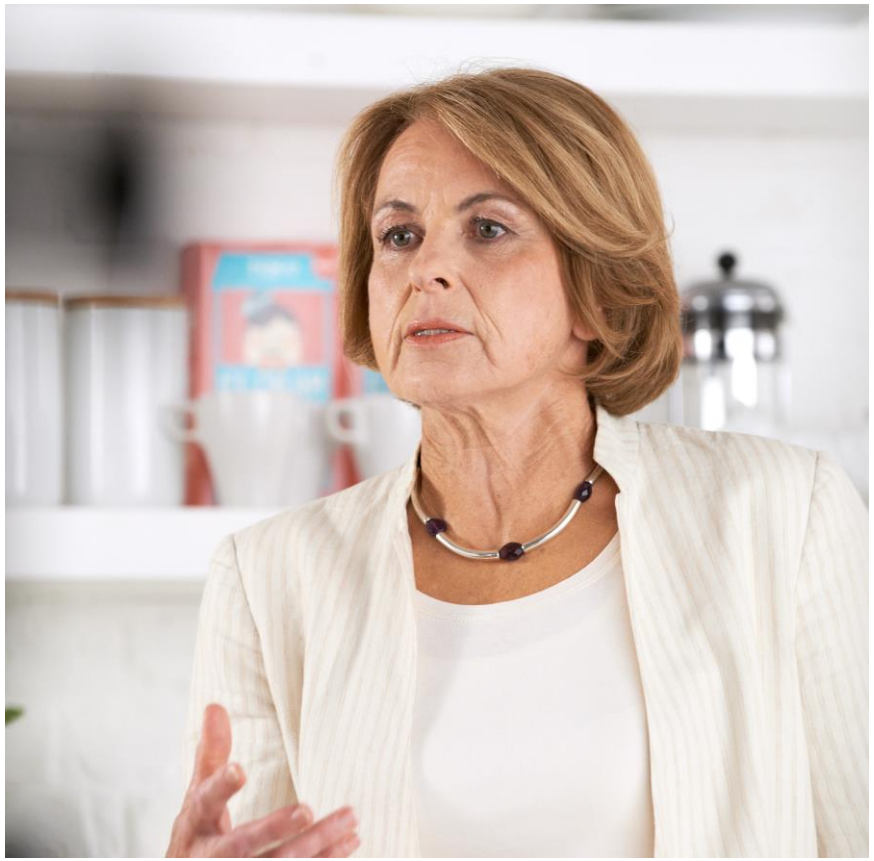
UK guidance on physical activity during pregnancy is the same for adults:

- At least 2 ½ hours of moderate intensity aerobic activity such as cycling, swimming, gardening, dancing or fast walking every week, **and**
- Muscle-strengthening activities on 2 or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders and arms). Examples include yoga, pilates or carrying shopping home

Healthy pregnant women should aim to continue this activity for as long as is comfortable. Those who did not exercise before pregnancy can slowly build up to this level. Those who were more active before pregnancy can continue with their higher levels of activity for as long as is comfortable.

Sports that might cause harm to the fetus should be avoided e.g. scuba diving and sports where being kicked or falling could injure the fetus – boxing, kick boxing, judo, horse riding.

Watch Judy More explain the step further



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A HEALTHY WEIGHT GAIN

3

during pregnancy depends on your pre-pregnancy weight and height. Expect to gain only 1-4 pounds (0.5-2kg) in the 1st trimester and the rest over the 2nd and 3rd trimesters – see overleaf

Policies on routine weighing during pregnancy and giving advice on healthy weight gain vary across the UK.

Excess or inadequate weight gain during pregnancy are associated with poor health outcomes for both mother and infant.

Being overweight before pregnancy, or excess gestational weight gain

- Increases the risk of gestational diabetes, pre-eclampsia, caesarean section, macrosomia and stillbirth
- Is associated with childhood obesity and maternal postpartum weight retention in the short, intermediate, and long term

Gaining too little weight during pregnancy in women of normal weight and those who are underweight, can result in infants being born with a low birth weight, which is associated with short and long-term health problems in the child.

There are currently no UK evidence-based recommendations on appropriate weight gain during pregnancy, but the American Institute of Medicine (IOM) recommends:

Pre-pregnancy weight	Appropriate weight gain during pregnancy	
	pounds	kg
Normal weight *BMI = 18.5-24.9	25-35	11.5-16
Overweight *BMI = 25-29.9	15-25	7-11.5
Obese *BMI greater than 30	11-20*	5-9*
Underweight *BMI less than 18.5	28-40	12.5-18

* It is safe for a mother who is severely obese before pregnancy to gain no weight at all during pregnancy

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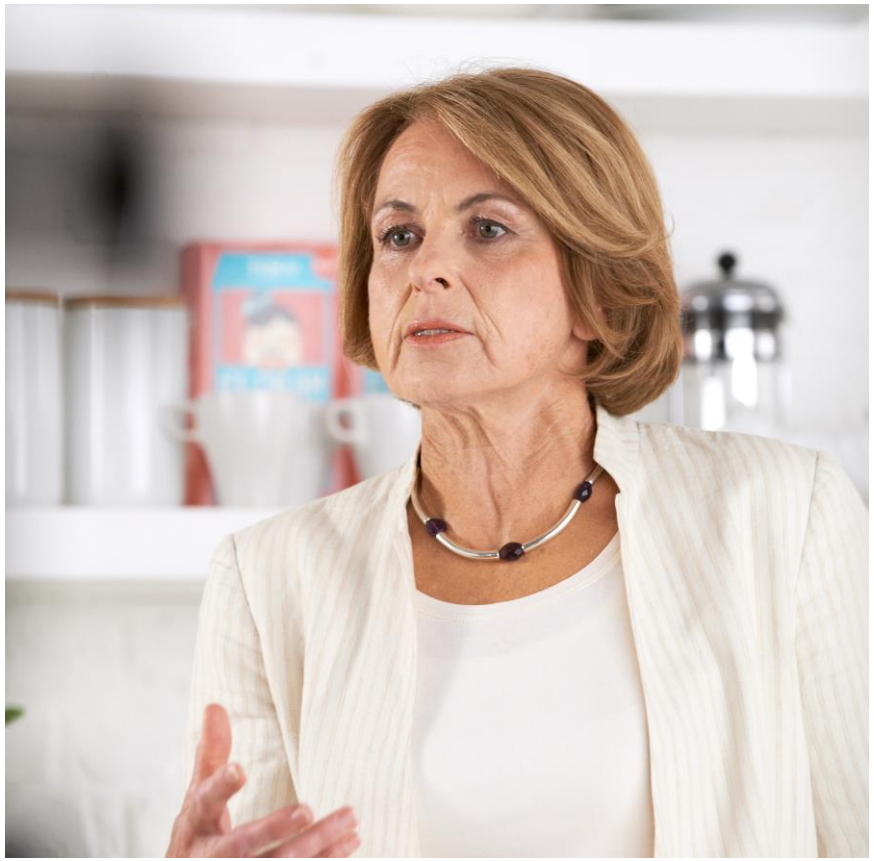

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4 CHOOSE NUTRITIOUS FOODS, NOT EXTRA FOOD

Extra energy (e.g. half a sandwich each day) is only needed during the last trimester

Requirements for some micronutrients are higher during pregnancy than for non-pregnant women, but extra energy from food is not needed during the first two trimesters.

Energy requirements depend on a woman's size, weight and activity levels. If a woman had a BMI within the normal range (18.5-25kg/m2) and was maintaining her weight before pregnancy then her energy requirement during the first and second trimesters of pregnancy will remain about the same as before pregnancy.

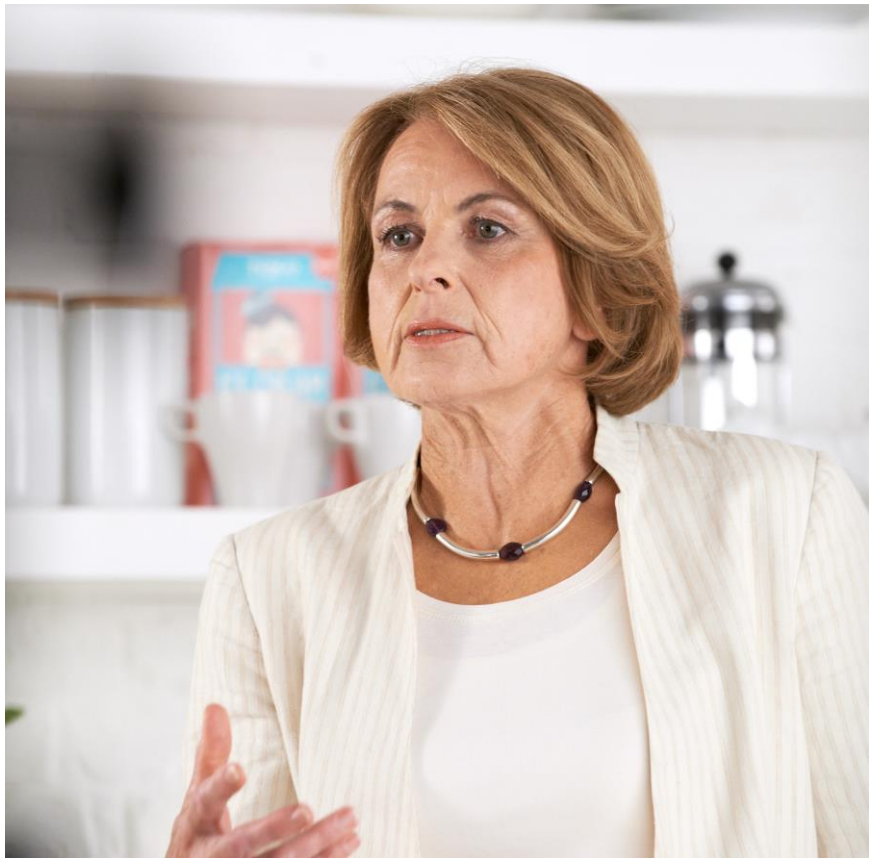
She should continue to eat the same size meals as she did before pregnancy and definitely not increase her food intake and 'eat for two'. This is because changes in metabolic rate and a reduction in physical activity during the first two trimesters accommodate the small amount of extra energy to support the growth of the fetus and to enable fat to be deposited in the mother's body for use during lactation.

The Department of Health recommends an extra 200 kcals per day from food for the final three months only.

Examples of food providing 200 kcals include:

- Two slices of buttered bread
- A bowl of wholegrain breakfast cereal with milk
- A bowl of lentil and tomato soup and a bread roll
- 1/2 chicken and salad sandwich

Watch Judy More explain the step further



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BALANCE YOUR DIET

Base each meal on wholegrain starchy foods such as bread, rice, potatoes, pasta or breakfast cereals and include:

- 3 servings of milk, hard cheese or yogurt each day for calcium and iodine
- at least 1 vegetable and 1 fruit in both main meals and include fruit (fresh, canned or dried rather than juice) with breakfast
- meat, fish, eggs, nuts or pulses at 2-3 meals each day for iron

A nutritious diet during pregnancy is based on a combination of foods from all five food groups listed below, along with recommendations for the number of daily servings to ensure adequate nutrient intake.

Food Groups	Recommendations
1. Bread, rice, potatoes, pasta and other starchy foods	**Base each meal and some snacks on these foods.** Using wholegrain varieties will increase fibre intake to address constipation in susceptible women. Other starchy foods include breakfast cereals, crackers, crispbread, quinoa, couscous, and flour based foods such as scones
2. Fruit and vegetables	**Include one or more of these at each meal and aim for at least five portions per day**
3. Milk, cheese and yoghurt	**Three portions of milk, cheese or yogurt per day where one serving is 200-250ml milk/yogurt or 30g cheese.** Use low fat varieties if overweight or obese prior to and during pregnancy
4. Meat, fish, eggs, nuts and pulses	**Two servings a day or three for vegetarians.** Include two servings of fish per week, at least one of which should be oily fish (e.g salmon, mackerel, trout, herring, sardines). Eat a food high in vitamin C at the same time as eggs, nuts and pulses to enhance iron absorption from these foods
5. Oils, butter and fat spreads	**Include small amounts in food preparation**. Choose high omega 3 oils e.g. rapeseed, olive and soya oils

EAT FISH TWICE A WEEK

with one or two servings as oily fish for omega 3 fats – if you don't eat fish take a daily supplement of 200mg DHA but avoid fish liver oil supplements

The omega 3 fatty acids docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) are essential fatty acids that are critical for brain development and vision during fetal development. They can be synthesised from other omega 3 fatty acids and are actively transported to the fetus across the placenta during the second half of gestation.

Consuming these two fatty acids in their pre-formed state from fish and supplements may benefit fetal development.

- Fish considered safe to eat during pregnancy include thoroughly cooked shellfish and white fish such as cod, haddock and plaice.
- Sufficient amounts of omega 3 fats are provided when fish is eaten at least twice per week and one or two of these is oily fish such as salmon, mackerel, trout, herring, sardines.

To ensure an adequate intake in women who do not eat fish, several expert bodies such as the European Food Safety Authority recommend a supplement of 100-200mg DHA per day in addition to the 250mg EPA + DHA per day that is recommended for all adults.

Fish is a good source of iodine and oily fish also provides iron.

CHOOSE NUTRITIOUS SNACKS

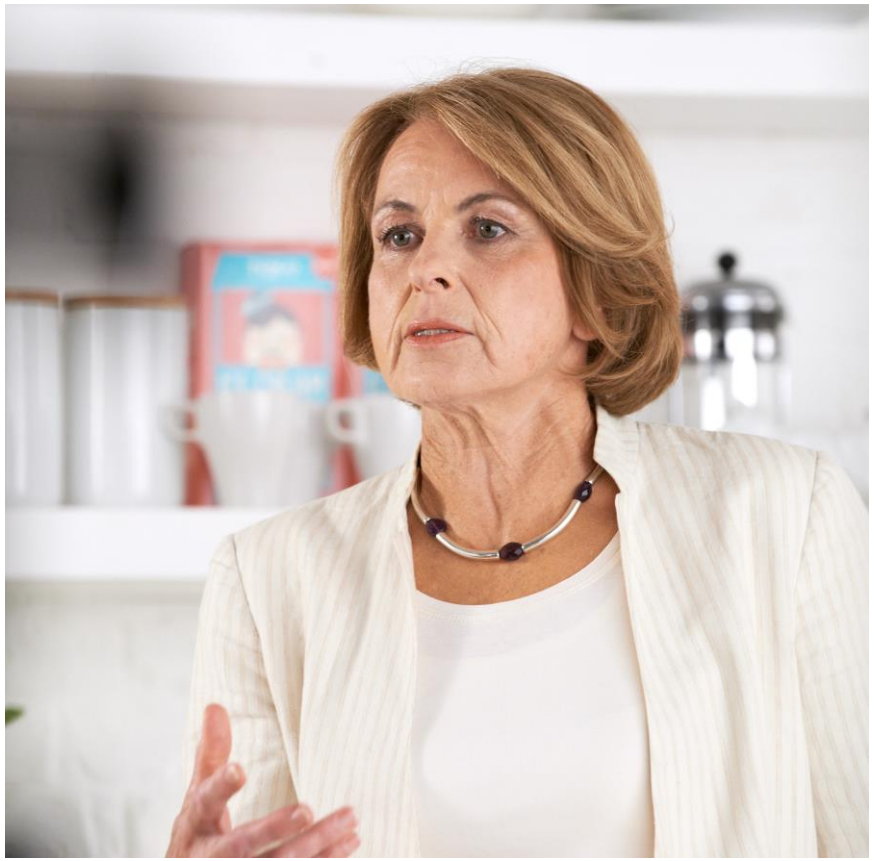
such as fruit, nuts, yogurt, a sandwich or toast rather than food or drink high in sugar or fat

To support the need for more nutrients during pregnancy, nutrient dense snacks are recommended in place of low nutrient density, high energy snacks such as crisps and similar packet snacks, biscuits and chocolate bars.

Recommended snacks include:

- Unsalted nuts with dried fruit
- Fresh fruit
- Vegetable sticks (e.g. carrot, cucumber, pepper, baby corn) and dips based on yogurt, cream cheese or hummus
- Wholegrain breakfast cereals with milk
- Cheese cubes and crackers or chapatti
- Sandwiches, bread rolls and pitta breads with fillings such as fish, egg, nut butters, cold meat along with salad or roasted vegetables
- French toast or toast with a range of spreads
- Slices of pizza with a plain dough base – not deep fried or pan fried
- Yogurt and fromage frais
- Crumpets, scones, currant buns, teacakes, scotch pancakes, fruit muffins
- Cakes and biscuits containing dried fruit, nuts or vegetables (e.g. fruit cake, carrot cake, date and walnut loaf)

Watch Judy More explain the step further



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HAVE ABOUT 6-8 DRINKS

(1 ½-2 litres) per day for good hydration – water is a good choice. Limit caffeine to 200mg per day (about 1 shot of espresso or 2 mugs of instant coffee or 2 ½ mugs of tea)

Good hydration is important for maintaining maternal plasma osmolality and amniotic fluid volume. All drinks and fluids and soups count.

Drinks that need to be limited are:

- **High sugar drinks** such as sweet drinks and fruit juices as these provide excess energy from their high sugar load
- **Caffeinated drinks.** A limit of 200mg caffeine per day is currently recommended because high levels of caffeine may raise the risk of miscarriage or low birth weights
- **Herbal teas.** Little information is known about the effects of herbal teas on the fetus and as a precautionary measure NHS Choices suggest limiting these to a maximum of four cups per day

The caffeine content of drinks and chocolate is:

1 shot of espresso coffee	140mg
1 mug of filter coffee	140mg
1 mug of instant coffee	100mg
1 cup of brewed coffee	100mg
1 mug of tea	75mg
1 cup of tea	50mg
1 cup/mug decaffeinated tea or coffee	about 10mg
1 can of cola	up to 40mg
1 can of energy drink	up to 80mg
50g bar of plain chocolate	up to 25mg
50g bar of milk chocolate	up to 10mg

Certain cold and flu remedies also contain caffeine.

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FOOD SAFETY

Thoroughly cook meat, fish and eggs; wash all soil from vegetables and fruit and avoid vitamin A supplements, liver, liver pate, unpasteurised dairy products, soft and blue cheeses, swordfish, marlin and shark; limit tinned tuna to 4 small servings per week

Extra care with food hygiene needs to be taken during pregnancy because certain food-borne illnesses can cause miscarriage, stillbirth, and abnormalities in the developing fetus or severe illness in the newborn.

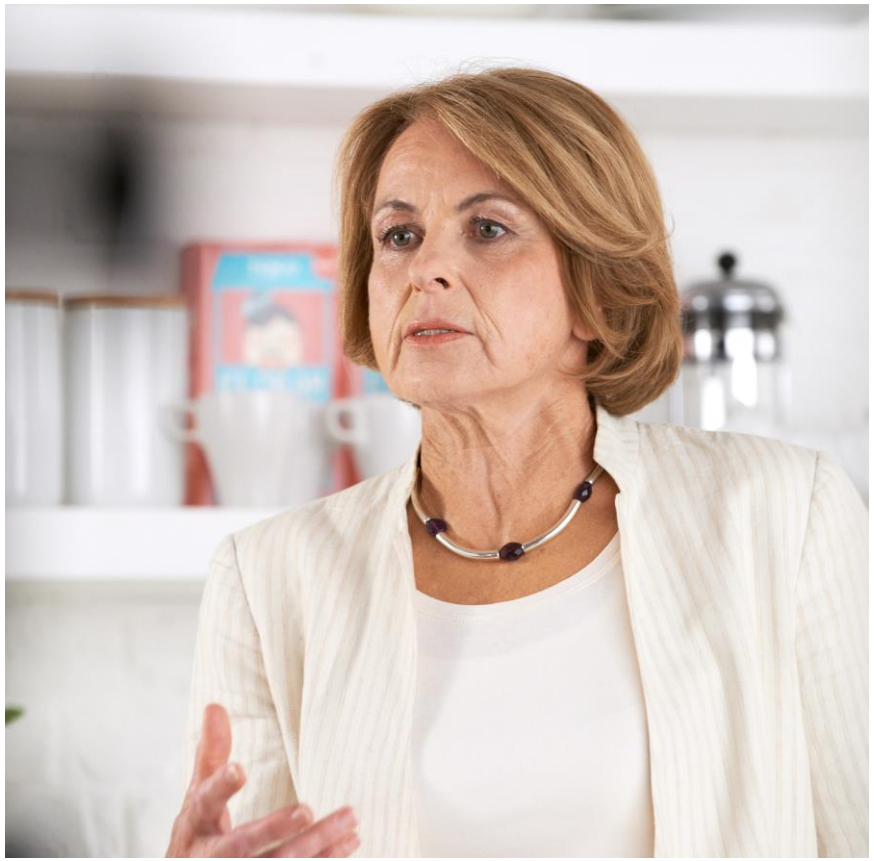
Precautions to take:

- Avoid pâté and unpasteurised milk products
- Only eat soft cheeses if they have been cooked (e.g. blue-veined cheeses and soft cheeses with a white rind)
- Wash vegetables and salad thoroughly to remove any soil or dirt
- Only buy unwrapped foods (e.g. cooked meats and prepared salads) where scrupulous food handling guidelines have been followed as these foods can easily become contaminated
- Heat ready meals to piping hot right through; heat once only and discard the leftovers
- Lion Brand eggs are safe to be eaten softly cooked. Other eggs should be cooked so that both the white and yolk are solid

Precautions to take:

- Thoroughly cook all meat
- Defrost poultry in the fridge and cook until piping hot right through
- Only buy raw shellfish (e.g. prawns, cockles and mussels) if they are packaged and stamped with a use-by date and cook them thoroughly
- Wash hands after handling raw meat, fish or shellfish
- Wash hands after touching cats
- Wear rubber gloves when emptying cat litter trays
- Wear gloves while gardening
- Don’t help with lambing or milking ewes that have recently given birth

Watch Judy More explain the step further



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Food-borne illness	Food/materials to avoid
Listeriosis A flu-like illness caused by the bacteria listeria monocytogenes	Pâté: meat, fish or vegetable unless tinned or pasteurised Mould riped soft cheese (e.g. brie, camembert, blue-veined cheese) Unpasteurised milk and milk products Ready meals, especially those containing chicken that are not heated thoroughly before consumption
Salmonella A bacteria which is the major cause of food poisoning in the UK	Non-Lion Brand eggs, raw or partially cooked, and foods containing them, such as mayonnaise and mousse
Toxoplamosis A disease caused by the parasite toxoplasma gondii found in raw meat, soil and cat faeces	Raw or undercooked meat Unpasteurised milk and milk products Soil Cat litter trays
Campylobacter A bacteria that commonly causes food poisoning in the UK	Undercooked poultry Unpasteurised milk and milk products Untreated water Soil Domestic pets

10 SEEK SUPPORT

to stop smoking or misusing drugs
or medication and avoid alcohol

Smoking during pregnancy increases the risk of miscarriage, stillbirth, premature birth, and sudden infant death syndrome.

Using recreational drugs and/ or misusing medication during pregnancy is associated with damage to the fetus and neonatal abstinence syndrome (NAS).

The safest approach in pregnancy is not to drink alcohol at all, as recommended by the Chief Medical Officer's guidelines. Alcohol in a mother's blood stream crosses the placenta into the blood stream of a fetus and results in nearly equal concentrations in the mother and fetus.

- The evidence strongly supports avoidance of alcohol during the first trimester of pregnancy, as two units of alcohol per week during this trimester increases the risk of premature birth, and those drinking two or more units also have an increased risk of having a baby with a lower birth weight

- Excess alcohol consumption during pregnancy (over 10 units per day) leads to fetal alcohol syndrome, which includes diminished fetal growth with intrauterine growth restriction and low birth weight babies who are often born with morphological abnormalities and impairment of the central nervous system, leading to delayed neurodevelopment

Quiz

- Now test your understanding of the Ten Steps for Healthy Pregnancy and take the quiz!
- Enter your contact details to be sent a certificate if you pass!

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