

Supplementary file S1: Weight record sheet, adapted 10TT (adapted from Lally et al, 2008) and example PACE information.

1 Keep to your meal routine:
Try to eat roughly the same time each day, whether this is two or five times a day.

2 Go reduced fat:
Choose reduced fat foods (e.g. dairy foods, spreads, salad dressings) where you can. Use high fat food sparingly (e.g. butter and oils), if at all.

3 Walk off the weight:
Walk 10,000 steps each day (equivalent to 60-90 min moderate activity). You can use a pedometer to help you count the steps. Start by counting your steps, then building up more each day with an ultimate target of 10,000.

4 Pack a healthy snack:
If you snack, chose a healthy option such as fresh fruit or low calorie yogurts instead of chocolate or crisps.

5 Learn the labels:
Be careful about food claims. Check the fat and sugar on food labels when shopping and preparing food. Be aware of what the higher fat and sugar foods are.

6 Caution with your portions:
Do not heap food on your plate (except vegetables). Think twice before having second helpings.

7 Up on your feet:
Break up your sitting time. Stand up for 10 minutes out of every hour.

8 Think about your drinks:
Choose water or sugar free squashes. Unsweetened fruit juice contains natural sugar so limit to one glass a day (200ml: one third of a pint). Alcohol is high in calories so limit to one unit per day for women and two for men. Try diluting your drinks with water, soda or low calorie mixers.

9 Focus on your food:
Slow down. Do not eat on the go or while watching TV. Eat at a table if possible. Enjoy your food.

10 Do not forget your 5 a day:
Eat at least five portions of fruit and vegetables a day (400 g in total). Try something new! Frozen and tinned (in water) count too.

	Festive food	Calorie content	Activity needed to burn calories (mins)	
			Walking	Running
	1 thick slice roast turkey (60g)	100	16 	8 
	5 pigs in blankets	70	12 	6 
	3 large roast potatoes (100g)	161	27 	14 
	Brussel sprouts (100g)	35	6 	3 
	5 tbsp gravy (125g)	50	8 	4 
	1 small Christmas pudding (450g)	1280	210 	110 

These are examples of PACE information of festive foods given to intervention participants. A full list is available on request from corresponding author. PACE information was calculated using the following website based on an 85kg male:

<https://www.bhf.org.uk/informationsupport/support/healthy-living/staying-active/exercise-calorie-calculator>.

We obtained the calorie content of the foods and drinks using McCance and Widdowson's composition of foods integrated dataset

(<https://www.gov.uk/government/publications/composition-of-foods-integrated-dataset-cofid>)

Supplementary information S2: Comparator healthy lifestyle information

Have a Healthy Lifestyle

“Being healthy isn’t a fad or a trend, instead it’s a lifestyle”.

Eating well, taking regular exercise and managing the demands of everyday life will help you to achieve a healthy lifestyle and in turn, enjoy better health.

Eating

What you eat, and how much, is very important. Having a healthy diet will help you to maintain a healthy weight, reduce your risk of developing type 2 diabetes, high blood pressure and high cholesterol and reduce your risk of developing coronary heart disease and some cancers.

What do I need to eat for my health?

A balanced diet is recommended for good health. This means you need to eat a wide variety of foods in the right amounts to give your body what it needs. For a balanced diet you should eat:

- plenty of fruit and vegetables,
- plenty of bread, rice, potatoes, pasta and other starchy foods (choose wholegrain varieties)
- some milk and dairy foods
- some meat, fish, eggs, beans and other non-dairy sources of protein
- just a small amount of food and drink high in fat and/or sugar

Sugar

Too much sugar can lead to the build-up of harmful fat on the inside of our bodies, often around our organs, which is damaging to health. Having a lot of this fat stored in the body can cause serious diseases, such as type 2 diabetes and heart disease. Eating too much sugar can also cause tooth decay.

Fat

There are different kinds of fat in the food we eat – saturated and unsaturated fat. We need some fat to help our bodies absorb vitamins and stay healthy but we shouldn’t have too much, especially of saturated fat as this can raise our cholesterol, leading to serious problems such as a heart attack or stroke.

Salt

Many of us in the UK eat too much salt. Too much salt can raise your blood pressure, which puts you at increased risk of health problems, such as heart disease and stroke. Adults should eat no more than 6g of salt a day – that’s around one teaspoon. Children should eat less than this.

Much of the salt we eat isn’t added at the table – 75% of the salt we eat is already in everyday foods including bread, breakfast cereal and ready meals.

Smoking

Smoking is the most damaging thing you can do to your health. From the day-to-day effects on your heart and your breathing, to longer-term smoking-related diseases such as heart disease, cancer and stroke, the consequences are severe. Your smoke can also harm your family’s health, too.

No matter how long you’ve smoked for, quitting can help improve your health straight away. Curb those nicotine cravings and improve your chances of quitting with stop smoking aids. Remember, there are plenty of treatments out there and they can give you the extra support you need to kick the habit for good. Many smokers also find e-cigarettes a helpful way to manage their cravings.

Alcohol

Men and women are advised not to drink more than 14 units of alcohol a week. This is the same as 6 pints of average strength beer a week. If you regularly drink above the lower risk guidelines, cutting back on alcohol can help your general wellbeing. From weight gain to increasing your risk of cancer, alcohol can have serious effects on your body. Once you start cutting back, you may quickly find you have more energy and feel less tired during the day as well as seeing improvements to your general health.

Physical Activity

Being active is really good for your body, mind and health. If you aren’t very active and spend long periods of time sitting (being sedentary) you increase your risk of developing serious conditions, including heart disease, type 2 diabetes and some cancers.

Sleep

Good-quality sleep is more important than the amount of sleep that you get and it helps to keep you feeling healthy. The odd bad night’s sleep can make you feel tired and irritable the next day, but it won’t harm your health. However, regular poor-quality sleep can have a huge effect on your health, putting you at risk of developing serious medical conditions and can affect your body, thoughts, emotions and behaviour.

Sleep provides you with a boost to your energy and immune system, helping your body recover from illnesses. While you sleep your body builds and repairs itself by making new tissue. Sleep helps your brain to recover and revive itself, helping it to make sense of the day, storing your memories and creating new ideas. Sleep allows your mind to unwind and de-stress and this allows your mental and emotional wellbeing to be restored.

There are simple things you can do to help you wind down and prepare for bed. Think about setting a bedtime routine where you wind down ready for sleep and go to bed at a set time. Remove distractions, like

your TV, computer and phone, from your bedroom. Avoid caffeine, nicotine, and alcohol too close to bedtime as they can keep you awake.

Stress

Lots of things can cause stress, including work, relationships and money problems. Stress can affect how you feel, think, behave and how your body works – ranging from how well you sleep to your immune system. In the short-term that's not really a bad thing, but long-term stress puts your health at risk. Reducing your stress levels and feeling more in control boosts your mood and means you are more able to cope with life's ups and downs. Getting stress under control supports your immune system and helps prevent serious health problems, such as high blood pressure and heart disease. There's no quick-fix cure for stress, but there are simple things you can do to help you stress less. These include relaxing, exercising, eating a healthy and balanced diet, and talking to someone.

Source: Public Health England, ONEYOU

Supplementary information S3: Table S3. Baseline health behaviour characteristics of participants according to randomisation group.

Table S3: Baseline health behaviour characteristics of participants according to randomisation group¹			
	All participants (n=272)	Comparator group (n=136)	Intervention group (n=136)
Cognitive restraint score: mean (SD)	13.5 (3.14)	14 (3.16)	13.1 (3.05)
Attending commercial weight management programme during study: n (%)			
Yes	25 (9.2)	12 (8.8)	13 (9.6)
Celebrating religious and/or social occasions i.e., Christmas: n (%)			
Yes	258 (94.9)	128 (94.1)	130 (95.6)
Alcohol consumption in the last week: n (%)			
Yes	170 (65.6)	90 (70.3)	80 (61.1)
Weekly physical activity: n (%)			
None	44 (16.9)	19 (14.8)	25 (18.9)
Once per week	59 (22.7)	29 (22.7)	30 (22.7)
2-3 times per week	98 (37.7)	53 (41.4)	45 (34.1)
4-5 times per week	35 (13.5)	16 (12.5)	19 (14.4)
6+ times per week	24 (9.2)	11 (8.6)	13 (9.9)
Frequency of self-weighing: n (%)			
Daily	25 (9.2)	13 (9.6)	12 (8.8)
6 times a week	3 (1.1)	1 (0.7)	2 (1.5)
5 times a week	3 (1.1)	1 (0.7)	2 (1.5)
4 times a week	11 (4)	3 (2.2)	8 (5.9)

3 times a week	5 (1.8)	3 (2.2)	2 (1.5)
Twice a week	20 (7.4)	9 (6.6)	11 (8.1)
Once a week	77 (28.3)	41 (30.2)	36 (26.5)
Less than once a week	70 (25.7)	37 (27.2)	33 (24.3)
Never	47 (18)	22 (16.9)	25 (19.1)
Cigarettes smoked per day: n (%)			
None	251 (95.8)	124 (96.1)	127 (95.5)
≤5	4 (1.5)	2 (1.6)	2 (1.5)
≥6	7 (2.7)	3 (2.3)	4 (3)
Weight management intentions: n (%)			
Lose weight	173 (66.8)	89 (69)	84 (64.6)
Maintain weight	64 (24.7)	33 (25.6)	31 (23.8)
Not trying to lose or gain	22 (8.5)	7 (5.4)	15 (11.5)
Following a weight loss diet: n (%)			
Yes	49 (18.6)	24 (18.5)	25 (18.8)
Taking prescribed medication to control weight: n (%)			
Yes	1 (0.4)	0 (0)	1 (0.8)

¹ Some variables have missing data due to non-return of questionnaires

**Supplementary information S4: Table S4. Mean follow up times (days)
per randomisation group per year.**

Table S4: Mean follow up times (days) per group per year			
	All participants (n=93)	Comparator group (n=48)	Intervention group (n=43)
Participants in 2016. Time in study: mean (SD)	42.4 (5.8)	43.5 (6.3)	41.3 (5.3)
	All participants (n=179)	Comparator group (n=88)	Intervention group (n=91)
Participants in 2017. Time in study: mean (SD)	46.8 (4.9)	47.2 (5)	46.4 (4.9)