Evidence shows that Type 2 diabetes can be either prevented or delayed through multicomponent lifestyle interventions in high-risk individuals and risk can be reduced by approximately 50%. Nutrition, physical activity and sustained weight loss are the key components of these interventions.

**Weight loss**
Weight loss is the strongest predictor of Type 2 diabetes prevention. But how much weight loss is significant?

- Aiming for weight loss of at least 5% where appropriate can significantly reduce the risk of Type 2 diabetes in those at high risk.
- For some people, a 5% weight loss can feel a long way off. It can be helpful to start with an initial weight loss target before agreeing a revised weight loss goal.
- It may motivate someone to know that even 1kg weight loss can reduce their risk of Type 2 diabetes.
- Encouraging and supporting the maintenance of any weight loss is also important to keep the risk of Type 2 diabetes reduced.
- For those who are motivated to lose more, or have already achieved 5% weight loss, aiming for a target of 10% may be realistic – this can reduce the risk of future Type 2 diabetes by 80%.

**Strategies for weight loss**
For people at risk of Type 2 diabetes, there is no one diet that is superior for weight loss. A variety of different dietary approaches have been proved effective, allowing a degree of flexibility for people at risk. However, there were some key components of the interventions used in trials.

**Energy restriction:**
- to induce 5% to 7% weight loss

**Dietary modification:**
- moderate total fat intake (<35% total energy intake)
- reduced saturated fat intake (<10% total energy intake)
- increased dietary fibre intake (>15g/1,000kcals).

**Increased physical activity:**
- aiming for at least 30 minutes/day or 150 minutes/week of moderate to vigorous activity.

**Specific foods and dietary patterns**
Some foods may protect against Type 2 diabetes, some may increase risk, while others are neutral.

<table>
<thead>
<tr>
<th>Reduced risk</th>
<th>No risk</th>
<th>Increased risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholegrain products</td>
<td>Nuts</td>
<td>Red and processed meats</td>
</tr>
<tr>
<td>Fruits and vegetables, specifically blueberries, grapes and apples, green leafy vegetables</td>
<td>Fish</td>
<td>Potatoes, especially French fries</td>
</tr>
<tr>
<td>Yogurt and cheese</td>
<td>Eggs</td>
<td>Refined carbohydrates</td>
</tr>
<tr>
<td>Tea and coffee</td>
<td>Marine n-3 polyunsaturated fatty acids (PUFA) may have some beneficial effects in Asian populations.</td>
<td>Sugar-sweetened beverages</td>
</tr>
</tbody>
</table>

The association between alcohol and Type 2 diabetes risk is complex – evidence shows that those who drink moderate amounts have the lowest risk compared with those who drink a lot or nothing. Government guidelines advise not drinking more than 14 units a week on a regular basis. In March 2018, Diabetes UK published its updated nutritional guidelines for the prevention and management of diabetes. These are aimed at healthcare professionals supporting adults with diabetes or at risk of developing Type 2. In the first of a new series, Pav Kalsi, Senior Clinical Advisor at Diabetes UK, and Zahra Mohamed, student dietitian, London Metropolitan University, look at the significance of nutrition in the prevention of Type 2 diabetes.
basis, and to evenly spread these units over three to four days. Drinking heavily on one or two days per week increases the risk of various health conditions. Some dietary patterns (see below) feature many of the components which were identified as helping to lower the risk of Type 2 diabetes. For example, the Mediterranean and the DASH diets are high in unsaturated fat from olive oil and nuts, and low in saturated fat, as red and processed meats consumption is limited. These dietary patterns are also high in fibre from wholegrains, fruits and vegetables.

### Reduced risk
- Plant-based diets
- Vegan and vegetarian diets
- Mediterranean diet
- Nordic healthy diet
- Dietary Approaches to Stop Hypertension (DASH)
- Moderate carbohydrate restriction

### Increased risk
- High fat
- High glycemic index
- Low dietary fibre

### Physical activity
Evidence from randomised controlled trials and cohort studies report an inverse relationship between physical activity and Type 2 diabetes prevention. They support the current recommendations of 30 minutes/day or 150 minutes/week of moderate to vigorous activity.

Walking, occupational activity, leisure activity and resistance are associated with reduced risk of Type 2 diabetes. Recent research indicates that sedentary behaviour increases the risk of developing Type 2 diabetes.

### Food swaps can be helpful when giving advice.
For example:
- swapping low fibre foods, such as sugary cereals, white bread or white pasta and rice, with high fibre food products, such as wholegrain breads, wholegrain cereals, beans, lentils, fruits and vegetables
- swapping high saturated fat products, such as pie and pastries, butter, ghee and processed meat, with unsaturated food products, such as nuts, olive oil or rapeseed oil.

### Physical activity
Discuss the physical activity recommendations (30 minutes/day or 150 minutes / week of moderate to vigorous activity) and possible ways of achieving through their daily routines. For example, getting off a bus stop early or cycling to work and using the stairs instead of the lift. Encourage people to spend more time on their feet and less time sitting down.

### Individualised advice and ongoing support
When supporting people at risk of Type 2 diabetes, consider their individual needs, preferences and circumstances, eg, their lifestyle, culture, income, occupation and family life, and give tailored advice about diet, physical activity and weight loss. Address any questions or concerns the person has.

### Signpost and refer
People who need extra support and information to the Diabetes UK website, local exercise groups, weight management services or the NHS Diabetes Prevention Programme. Refer them to a dietitian for more tailored, individualised advice.

### Helping your patient reduce their risk of Type 2 diabetes
Identifying someone at risk of Type 2 diabetes (through a NHS Health Check, diabetes risk tool, such as our Know Your Risk tool, a blood test or by the presence of certain risk factors) presents an opportunity to talk about preventing or delaying the condition. Find our risk tool at www.diabetes.org.uk/riskscore.

Here are some tips:
- **Risk factors.** Discuss an individual’s risk factors with them. What is increasing their risk and what could they change to reduce their risk of Type 2 diabetes?
- **Weight loss.** Explain that it’s possible to delay or prevent Type 2 diabetes and the associated complications of diabetes by losing weight (even a modest amount), eating well and doing physical activity. Discuss and agree a weight loss goal and ways they might achieve this.

### Specific food and dietary patterns
Encourage foods that are associated with a lower risk of Type 2 diabetes and encourage a reduction of the foods that are associated with an increased risk (see table over page). Encourage dietary patterns that are high in fibre and low in saturated fat, such as the Mediterranean diet or equivalent healthy eating patterns.

### The Diabetes UK Helpline is staffed by trained advisors who can help support people at risk of Type 2 diabetes.
**Call:** 0345 123 2399*, Monday to Friday, 9am to 6pm

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**Diabetes UK UK.**

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