



### Introduction

- Shift work is ubiquitous to the operational policing environment for both officers and staff. Working shift patterns that rotate between early starts and night shifts can exacerbate the disruption of the internal body clock and can lead to sleeping difficulties, challenges leading a healthier lifestyle, and increased symptoms of fatigue.<sup>1</sup>
- When officers are fatigued, they will be less alert, their reaction times will be slower, they will find it harder to concentrate, and it can impact on decision making. This impacts officer wellbeing, can lead to accidents, and increases the risk of injury.<sup>2</sup>
- The links between diet and health in shift workers is complex and involves interactions between sleep, light exposure, circadian rhythms, and genetic predisposition.
- Improving diet quality is particularly important for shift working colleagues to mitigate the feelings of fatigue and some of the health risks that are associated with shift work.<sup>3</sup>

### Minimising fatigue with diet

- It is important to maintain a healthy, balanced diet with adequate fluid intake. This will aid energy management and help manage your symptoms of fatigue. As part of this series we will be launching a library of resources to help you, such as a video series and downloadable nutrition guides.
- Carbohydrates are our primary source of energy, which is important to fuel our bodies and our brains, which will improve your performance and alertness. Foods with a lower Glycaemic Index (GI) release energy more slowly that will help keep your blood glucose levels steady. Lower GI foods are also associated with higher fibre foods that provide a more stable energy supply and promote good gut health. Examples include wholegrain rice and pasta, wholemeal bread, beans, pulses, and porridge.
- Aim for at least five portions of a variety of fruit and vegetables each day for vitamins, minerals, and fibre – fresh, frozen, tinned and dried all count. Fruits and vegetables also contain antioxidants, which combat against the effects of oxidative stress. Oxidative stress is where harmful molecules build up faster than the body can remove them, which can lead to increased fatigue.
- Protein is essential in the diet and will support your body's ability to repair between shifts. Beans, pulses, fish, eggs, and meat are a good source of protein, vitamins, and minerals. Many of these foods are also rich in iron and vitamin B12, which are important for the generation of red blood cells that transport oxygen around the body.
- Milk, cheese, and yoghurt are a source of protein and vitamins such as calcium and vitamin D. Vitamin D improves the absorption of calcium, which helps keep bones healthy and helps our muscles to function. If choosing dairy alternatives, ensure you select versions that are fortified with calcium.
- It is important that police officers include foods that contain Omega 3 unsaturated fats due to their joint and cardio-protective properties. Foods that are rich in Omegas have anti-inflammatory properties and are associated with improved brain health and cognition.

## Nutrition and Fatigue

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Sources include oily fish such as salmon and mackerel, nuts, and seeds such as walnuts and sunflower seeds, and unsaturated oils such as olive oil.

- Hydration is essential, however shift workers are at an increased risk of dehydration. During the night our feelings of thirst diminish meaning we lose our natural prompts to drink. Dehydration is linked to reduced cognition, brain fog, and fatigue. Aim to drink 2-3Litres of fluids per 24-hour period. Water, milk, and sugar-free drinks all count. Tea and coffee counts, however, if caffeine affects your sleep, avoid caffeinated drinks after 3am during night shifts and after 6pm during day working routines.
- You may find it helpful to batch-cook and freeze meals in individual portions for days when you are lower in energy. Using rest days to do your grocery shopping and sticking to simple recipes can make food preparation more practical for shift workers.

### Impact of shift work

- Shift workers understand the challenges to maintaining a healthy lifestyle. Improving diet quality, physical activity levels, and improving sleep habits will all help - the approach should be pragmatic and realistic to best support you. Our [Healthy Eating to Support Shift Work](#) Factsheet considers some of the specific needs of shift working officers and staff, which includes practical nutrition and hydration ideas.
- Due to a reduced exposure to sunlight, it is recommended that shift working officers and staff supplement with Vitamin D year-round. Vitamin D is also linked to improved immunity and bone health.

### Gastrointestinal symptoms

- Many shift workers report IBS-like symptoms, including constipation, diarrhoea and/or bloating. This can exacerbate feelings of fatigue. You will find helpful dietary advice in the [BDA Food Factsheet on IBS](#), for example advice on reducing caffeine, fizzy drinks, and rich/fatty food.
- If your IBS symptoms persist, talk to your GP. Avoid self-diagnosing potential food intolerances as misdiagnosing is common and it can result in unnecessary restriction and nutrient deficiencies that can worsen your symptoms of fatigue.

### Nausea

- Some shift workers experience nausea. To help, aim to keep up adequate fluid intake and eat regularly, having small amounts often. Not eating or drinking may increase your nausea, which can impact your wellbeing and levels of fatigue.

### Top dietary tips for managing fatigue

- Fatigue affects people differently and can fluctuate over time. Trial a variety of strategies to determine what works best for you.
- Maintaining a healthy diet and adequate fluid intake can aid energy management and help manage your symptoms.
- Choose 'lower GI' carbohydrates that release energy more slowly.
- Batch cook and freeze meals in individual portions for days when you have less time or energy for cooking.

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- You may benefit from dietary advice to manage gastrointestinal symptoms.
- Discuss any suspected food intolerances with your GP before unnecessarily restricting your diet.
- Take a daily vitamin D supplement.

### Nutrients to support fatigue management

Nutrient	Role in fatigue management	Sources
<b>Fibre</b>	Associated with lower GI foods, which provide a more stable energy supply. Fibre is also linked to improved digestive and gut-health.	Fruit, vegetables, wholegrains, beans, pulses, brown and wholemeal bread, pasta, rice etc.
<b>Omega-3s</b>	Anti-inflammatory* and linked to improved cognition as well as joint and cardio-protective properties.	Oily fish such as salmon, mackerel, sardines, and trout.
<b>Vitamin C</b>	Reduces oxidative stress**	Oranges, peppers, blackcurrants, strawberries, broccoli, tomatoes, green vegetables
<b>Vitamin E</b>	Reduces oxidative stress**	Plant oils such as rapeseed, olive, sunflower; nuts and seeds
<b>Polyphenols</b>	Reduces oxidative stress**	Berries, plums, kiwis, aubergines dark chocolate
<b>Iron</b>	Essential in generation of red blood cells, which transport oxygen around the body. Low levels impact feelings of fatigue and muscle function	Red meat, poultry, fish, liver, tofu, lentils, leafy greens, spinach, cashew nuts, broccoli, dried fruit
<b>Vitamin B12</b>	Formation of red blood cells and works as a coenzyme of protein and fat into energy	Eggs, salmon, milk/dairy, red meat, poultry, fish, liver, fortified cereals
<b>Probiotics</b>	Help maintain a healthy gut and gut bacteria linked to improved mood and general health.	Fermented foods e.g. yoghurt, kefir, sauerkraut, kimchi, products fortified with strains of bacteria such as Yakult and Actimel
<b>Prebiotics</b>	Help maintain a healthy gut and gut bacteria linked to improved mood and general health.	Onions, garlic, leeks, oats, beans, asparagus, barley, lentils, apples, chickpeas, bananas, dried fruit
<b>Vitamin D</b>	Reduces inflammation, other mechanisms unknown.	Sunlight, eggs, oily fish, red meat, fortified cereals. Supplements are recommended between October and April inclusive in the UK due to less sunlight (400 IU or 10 µg per day)

\* Inflammation is the body's reaction to harmful situations such as stress, illness, or injury.

\*\* Oxidative stress is where harmful molecules build up faster than your body can remove them.