



CAREERS

What should I eat on my night shift?

On a busy night shift, eating healthily is not always a top priority. But, as three experts tell **Abi Rimmer**, eating well at night can maintain your energy and have long term benefits

Abi Rimmer

The BMJ

Planning ahead is your friend

Martin Kohlmeier, director of the Human Research Core at the University of North Carolina's nutrition research institute, says, "The effect of a disrupted sleep cycle on energy metabolism is real but of modest size. In the end, it's about the practicalities of food access, convenience, and the time demands of the shift. Planning ahead is your friend. Your first thought should be hydration—go for water and other calorie free drinks because you will need a lot of it. Dehydration, paradoxically often from too much caffeine, is a common cause of fatigue.

"Before your shift, eat a main meal with whole grains and other complex starches to curb your hunger and cravings.

"Take your own food with you so that you don't fall into the delivery service and vending machine trap. Convenience foods typically contain extra calories, sugar, saturated fat, and salt, but do not keep you full for long. Sugary and salty foods are also a major reason for the weight gain that is such a common problem for shift workers.

"Plan for your meal breaks: high protein foods like chicken and hummus are filling and calm cravings, while prepackaged healthy snacks, such as unsalted nuts and cut vegetables, are accessible on the run. Always pack water with your lunch box."

Calories at night do count

Roopa McCrossan, vice chair of the trainee committee of the Association of Anaesthetists and member of the association's joint fatigue working group, says, "Cake, crisps, and chocolate? Oh sorry, that's what we want to eat on night shift—what you should eat couldn't be more different. The bad news is, calories on nights do count, in fact they may count more than you think.

"The reason the night shift makes you feel awful is the misalignment of the circadian clock and the sleep-wake cycle. Sleep deprivation affects food choices—there is evidence that you are more likely to crave calorie dense carbs, sugary food, and salty snacks^{1,2}—and limits our ability to process food. So, how can we avoid the pitfalls?

"Firstly, eat a healthy, filling meal before your shift—choose foods that will release energy slowly. Keep hydrated during the shift—water is best.

"Avoid eating between midnight and 6 am, if possible, and if you do need to eat during the night, go for low calorie, protein rich snacks—don't graze your way through the night.

"Finally, eat a healthy breakfast before your daytime sleep so you don't wake up hungry.

"Try it out on your next set of nights and see how you get on."

Make a night shift survival pack

Minha Rajput-Ray, occupational physician and medical director of the NNEdPro Global Centre for Nutrition and Health, says, "Shift working is inevitable for healthcare staff. The 'internal body clock' disruption can put doctors at higher risk of gastrointestinal symptoms, cardiometabolic disease, and may contribute to poor psychological health. These tips can enable you to be in peak condition to get through those night shifts. Further guidance may be needed for employees with diabetes, those using medication, and those observing dietary restrictions for religious reasons.

"Firstly, make healthy choices. Focus on nutrient quality, good quality proteins, and slow release carbohydrates. Try your best to avoid processed food to minimise insulin spikes.

"Get into a routine. Eat your main meal in the earlier part of the evening—ideally before you begin the night shift—to provide your body with much needed fuel. This also means that if you don't get a proper break you can manage with some healthy snacks for the rest of the shift.

"Invest in a night shift 'survival pack'. Keep a cool bag handy with healthy snacks such as snack bars and wholemeal crackers. Top up with a yogurt pot and easy to carry fruit like bananas, tangerines, or apples.

"Watch your caffeine; sweetened caffeine drinks contribute to total calorie intake and may interfere with the much needed rest at the end of the shift.

"Finally, keep hydrated. As a rule of thumb, sipping from a 1 litre bottle of water (ideally frozen) throughout your shift will assist in your fluid intake and cognitive performance."

Don't reach for the cake

Rupy Aujla, founder of The Doctor's Kitchen, says, "Stick to foods that have a low glycemic index, are nutrient dense, and contain high quality fats to keep you going. I tend to have a low carbohydrate and protein rich meal before I start my shift.

"While you're working, try to graze on nutrient dense foods to keep you satiated. If you find yourself desperate for a caffeine hit, stick with green tea. Coffee raises your already elevated

adrenaline levels, leading to high cortisol and insulin which can result in weight gain. I plan to have a cup of tea about halfway through my shift; it's enough to keep my energy levels up for the rest of the shift, yet still allow me to sleep when I get home.

“Try to avoid sugary snacks, processed foods, and high carb foods. Preparation is key to make sure you don't reach for that cake somebody always brings in with the best intentions (please stop eating cake at night!). Before you get your last sleep in before starting your night shifts make sure your food is ready.

“Finally, exercise. I always make sure I exercise before a night shift. Even if it's something as simple as stretching, yoga, or a

short high intensity interval training session. It gets my blood pumping, endorphins running, and I find it refreshing before a shift.”

- 1 Greer SM, Goldstein AN, Walker MP. The impact of sleep deprivation on food desire in the human brain. *Nat Commun* 2013;4:2259. 10.1038/ncomms3259 23922121
- 2 Hanlon EC, Tasali E, Leproult R, et al. Sleep restriction enhances the daily rhythm of circulating levels of endocannabinoid 2-arachidonoylglycerol. *Sleep* 2016;39:653-64. 10.5665/sleep.5546 26612385

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