

“Policing on an Empty Stomach” Literature Review:

I will be looking into the current research there is around intermittent fasting and comparing the pros and cons of this, based on the different roles between police officers and police staff. Personally, I have always done shift work and there has always been set lunch breaks or rest periods within the working day. However, since working with Gwent Police, regardless of the structure of the shift, there are no set break times, compared to my previous shift work and sometimes altogether, there are no break periods at all during shifts.

Within my role as a police officer, I have been experiencing forced intermittent fasting due to operational demand. This intermittent fasting has had a negative effect on me personally, as not only has my weight has increased, but I find that I struggle to concentrate and function how I would normally, had I gotten sufficient fuel from my food.

This brings me to question how other officers and police staff are dealing with operational demand and how they are finding different solutions to manage their eating habits whilst on shift.

Therefore, the main purpose for researching intermittent fasting, is to understand whether there are any benefits to fasting and if bringing in intermittent fasting full time during shifts, would benefit my body and mind. Also, understanding any impacting factors that would suggest a need for finding building blocks to bypass barriers of operational work, such as management protecting officers or police staff throughout their shift, to encourage a proper rest and refuel period, because intermittent fasting could hinder officers and police staff both physically and mentally.

Leading on to some of the pros of intermittent fasting and the role nutrition has on physical and cognitive performance. Research by Mattson, Longo and Harvie (2017), shows that intermittent fasting may enhance cognitive function because fasting increases the production of brain-derived neurotrophic factors, which are proteins that promote the growth and survival of brain cells. Additionally, the research around increased production of brain-derived neurotrophic factors from fasting, shows that it may also improve memory as they are thought to protect against cognitive decline and can reduce the risk of developing neurodegenerative diseases.

There are some cases in research where people have reported enhanced focus during fasting periods, particularly in the morning before they have breakfast. This is because during fasting,

the body produces ketones from breaking down and using fat as an alternative energy source, instead of the body using glucose for energy. Studies show that intermittent fasting is often used as a tool for weight loss, due to the reduced calorie intake and the increased fat burning, because when the eating window is limited, the body eventually enters that state of fasting, where it encourages the breakdown of fats for energy use (Harvie and Howell, 2016). Ketone production has been shown to improve mental clarity, focus and cognitive function (Andriessen et al., 2023). Other studies have also found that fasting enhances alertness and cognitive performance in the short term and this is likely due to the body's increased release of adrenaline and other hormones (Gudden, Arias Vasquez and Bloemendaal, 2021).

There are other health benefits from intermittent fasting and further research by Mattson, Longo and Harvie (2017), suggests that intermittent fasting periods can help lower blood sugar levels, and this has been linked to improved insulin sensitivity, which is beneficial for preventing type 2 diabetes, by reducing the risk of insulin resistance. Zarn (2024), found that fasting can simulate a process called autophagy, which is where the body cleans out damaged cells and regenerates new ones. This has been associated with various health benefits, including improved longevity and disease prevention. Other studies have also found that intermittent fasting may lower markers of inflammation, which are linked to chronic diseases, such as heart disease, diabetes and cancer (Mattson, Longo and Harvie, 2017).

Moving on to some of the cons of intermittent fasting and the role nutrition has on physical and cognitive performance. Berg (2023) found that whilst some people experience improved focus over time while intermittent fasting, others may find it challenging initially, as it can hinder their judgement, due to fatigue, headaches and irritability, which can negatively impact concentration. Other studies have found that prolonged intermittent fasting may affect certain hormones, especially in women, and it can cause disruption in menstrual cycles and may affect reproductive health, if fasting is not managed properly (Letts, 2024). Not only can extended periods of fasting cause changes to hormones, but Klempel et al (2012) found that prolonged fasting or low-calorie intake may result in muscle loss, especially if it is not combined with adequate protein intake or strength training - this can be a concern for individuals that are aiming to maintain muscle mass.

Klempel et al (2012) also found that one of the most common side effects of intermittent fasting is increased hunger. This can lead to irritability and difficulty maintaining the fasting and schedule of it, as some people experience difficulties adapting to the eating windows, especially at the beginning stages. Furthermore, since intermittent fasting restricts eating to a shorter window, there may be a risk that some individuals may over-eat during their feeding

periods. This can potentially offset the benefits of fasting and hinder weight loss or cause other digestive issues (Harvie and Howell, 2016). Other studies have also shown that if not carefully planned, intermittent fasting may lead to nutritional deficiencies. Reducing food intake to a limited timeframe may make it harder to meet the body's new nutritional needs, especially if one is not consuming a balanced diet during eating periods (Mattson, Longo and Harvie, 2017).

Although there are lots of studies on intermittent fasting in general, there are no studies on intermittent fasting within policing and whilst police officers and police staff are under such high pressures to perform work duties. These studies do not take into consideration the physicality of a police officer's role or the mental pressures of the police staff's roles. These studies also do not take into consideration the severity of the information that police officers are capturing and documenting as part of their daily interaction with the public, making sure that the right references and support are being put in place for victims of crime. Therefore, the aim of this project is to gain a clear understanding of what intermittent fasting is doing to officers on the ground and without judgement, seeing the quality of written work or the quality of physical aspects of the role being carried out, as well as the police staff in the control room, compared to when officers and police staff have been able to have their rest period and eat sufficient food, compared to those officers or police staff who have been unable to have a rest period or eat any food on shift. Within Gwent Police Federation (2025) policy, it states: "where an officer is on duty for a continuous period of 5 hours or more, they are entitled to a refreshment break, as far as exigencies of duty permit, however, this does not mean that refreshment breaks can be abused or ignored".

To conclude, intermittent fasting offers several health benefits including weight loss, improved insulin sensitivity and enhanced cognitive function. However, it is not without drawbacks, such as potentially increased hunger, possible nutritional deficiencies and the risk of over-eating during the feeding windows. When it comes to mental focus, intermittent fasting can lead to an increased clarity and alertness due to ketone production, but some individuals may need time to adjust to this before seeing benefits.

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