New Study Links Shift Work and Diet to Inflammation & Health Issues

Shift workers are one of the more vulnerable segments of the workforce and so have been the subject of many studies. Such studies have found that shift workers are at higher risk for certain health problems.

A new study may have an explanation for some of these health issues: diet.

The study, which was published in the February Journal of Occupational and Environmental Medicine, the official publication of the American College of Occupational and Environmental Medicine (ACOEM), found that people who do shift work are more likely to have a diet that promotes chronic inflammation, which may partly explain the health risks associated with shift work.

For example, shift work has been linked to increased risks of disease, including high blood pressure, obesity, cardiovascular disease and diabetes. Poor eating habits may contribute to some of these risks. Western-style diets with higher levels of calories and fats have been linked to increased inflammation, compared to Mediterranean diets high in fruits and vegetables.

The researchers analyzed the relationship between shift work and pro-inflammatory diet using data from a nationwide sample

of employed adults and calculated a ‘dietary inflammatory index’ (DII) for each individual.

The DII provides a way of measuring how ‘pro-inflammatory’ a person’s diet is. The greater the DII score, the more pro-inflammatory the diet.

A recent study of police officers found a higher DII in officers doing shift work. The new study suggests a similar elevation in DII among shift workers in the general population.

After adjusting for other factors, researchers found that shift workers had an elevated DII compared to day workers. The difference was significant for rotating shift workers’that is, those who worked varying shifts’who had an average DII 1.07 compared to 0.86 for day workers.

In addition, women had higher DII values than men. Among women, the DII was higher for evening or night shift workers compared to day workers: 1.48 versus 1.17.

Although it’s still unclear how much of an impact the elevated DII would have on health, a pro-inflammatory diet might be one factor contributing to shift work-related health risks. ‘Inflammatory diets represent a target for behavioral interventions to reduce the health impacts of shift work,’ said the researchers. Such interventions, which employers may be able to help with, include:

- Physical activity
- Proper sleep
- Light exposure.

Here are some additional studies and information on shift workers:

- Shift Work in Canadian Industries’a Probable Cancer Risk Factor

- Night and shift workers are most likely to get injured (confirmed by another study)
- Return-to-work and non-standard schedules
- Shift workers and training.