

# Female shift workers may be at higher risk of heart disease

October 23 2011

---

Women hospital staff working night shifts may be compromising their own health as they try to improve the health of patients, Dr. Joan Tranmer told the Canadian Cardiovascular Congress 2011, co-hosted by the Heart and Stroke Foundation and the Canadian Cardiovascular Society.

Dr. Tranmer's study investigated the connection between [shift work](#) and [risk factors for heart disease](#) in female hospital employees who worked both shift and non-shift rotations.

As a former nurse familiar with shift work and because of her concern about the health of the female hospital work force, Dr. Tranmer questioned whether late nights were taking their toll on the health of her fellow hospital employees. "As I walked through the hospital and talked with my colleagues, I was concerned about what I was seeing in a lot of the workers," she said. "We did not know if this is related to shift work or other aspects of hospital work".

Her study reinforced what she observed about the health of female hospital employees. Dr. Tranmer studied 227 women ranging in age between 22 and 66 (with a mean age of 46) from two hospitals in southeastern Ontario. The study included not only nurses but a variety of staff, including administrative employees as well as lab and equipment technicians, who worked a variety of rotations.

She examined each of the women's possible risk factors associated with

metabolic syndrome. The syndrome's five indicators are abdominal obesity (elevated waist circumference), [high blood pressure](#), elevated [blood glucose](#), elevated triglycerides, and low levels of high-density lipoprotein (HDL) cholesterol, also known as 'good cholesterol.' The women also completed a detailed survey about their work history and lifestyle.

The findings of this study suggest that approximately one in five middle-aged women who do shift work have at least three risk indicators for heart disease.

From the group, 17 per cent had metabolic syndrome, with at least three of the identified indicators. Thirty-eight per cent had high blood pressure. Of particular concern was the finding that 60 per cent of the participants had a waist circumference greater than 80 cm (31.5 inches).

Abdominal obesity and elevated waist circumference are good predictors for risk of developing heart disease, stroke, high blood pressure, cholesterol and type 2 diabetes. The greater your [waist circumference](#), the higher your risk of developing these conditions.

The study found that age and current shift work status were significantly associated with increased risk. Women over 45 years, those who had reached menopause, had a shift work history of more than six years, and those currently working either 12 hour shifts or rotational shifts were more likely to have metabolic syndrome.

[Metabolic syndrome](#) was present in eight per cent of those working shifts for less than six years, in 18 per cent in those working shifts for six to 15 years, and in 74 percent of those working shifts for more than 15 years. While the increase in prevalence of risk factors is also associated with age, the influence of the combination of older age and shift work on risk raises concern.

"Just how shift work contributes to the development of such risk factors isn't clear," says Dr. Tranmer. "It is possible that the disruption of biological rhythms, sleeping, eating, and exercise patterns may be factors." The research team is exploring these potential pathways in a current study.

A Statistics Canada survey on the work-life balance of shift workers found that long work hours were associated with role overload. Shift workers were more likely to cut back on sleep, to spend less time with their spouse, and to worry about not spending enough time with family, compared with regular day workers.

"All women should manage their weight and other risk factors, and this study shows women working shift work especially need to be aware," said Heart and Stroke Foundation spokesperson Dr. Beth Abramson. "We spend so many of our hours and days at work, it is important for employers and employees to create as healthy a work environment as possible – especially for shift workers."

She says that, given the prevalence of these cardiovascular [risk factors](#), and in particular with abdominal obesity rates and the increasing age of the female hospital workforce, this study raises the need to examine workplace policy encouraging healthy behaviours for all employees.

She recommends that women find out how they can protect their heart health through the Foundation's The Heart Truth™ campaign ([thehearttruth.ca](http://thehearttruth.ca)), which educates women about identifying their risks and warning signs of heart disease and stroke, and shows them how to make lifestyle changes and take action to reduce their risk by as much as 80 per cent.

"These women work so hard caring for others, but they need to take the time to properly care of their own health," says Dr. Tranmer.

According to Statistics Canada, over 4 million workers aged 19 to 64 worked something other than a regular day shift in 2005. Of these shift workers, about 3.3 million worked full time (30 or more hours a week). Rotating shifts and irregular schedules were the most common types of shift work, accounting for 2.3 million full-time workers. Women made up 37 per cent of all full-time shift workers. The majority of women working shifts (69 per cent) worked part time.

When asked if similar conclusions could be drawn for male shift workers, Dr. Tranmer said that much of our understanding about the associations between shift work and health come from studies that have predominantly included men so she wanted to focus on the link in [women](#).

Provided by Heart and Stroke Foundation of Canada

Citation: Female shift workers may be at higher risk of heart disease (2011, October 23)  
retrieved 8 May 2024 from

<https://medicalxpress.com/news/2011-10-female-shift-workers-higher-heart.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--