



Occupational Health
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Workers Inc.

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Heart Disease in the Workplace

What is Cardiovascular Disease?

Cardiovascular disease (CVD) is a broad term for any disease of the heart or the blood vessels. Cardiovascular disease is a major cause of injury and death in the industrialized world. CVD commonly occurs before the age of retirement and many people who suffer a heart attack are still in full time employment.

Some modifiable risk factors that put a worker at risk of heart disease include obesity, smoking, diabetes, high blood pressure, high blood cholesterol, and lack of physical activity. However, the working environment has risk factors that can affect someone who is at risk of a heart condition or has had a cardiovascular event (eg. heart attack).

These risk factors include:

- physical demands
- stress and strain
- shift work
- environmental conditions

Physical Demands

The requirements of your job can put excess strain on the heart. Physical activity involving the entire body can place increased strain on the heart compared to movement of the upper or lower limbs alone. For example, carrying a box involves the use of the upper limbs, the back, the stomach, and the lower limbs. This is much more demanding of the heart than typing at a computer. You should consider what activities you perform at work that require physical effort.

Job Stress/Strain

Job strain is caused by a combination of high psychological demand and the inability to make your own decisions or be creative at work.

The Effect of Stress on the Cardiovascular System

- Sudden stress increases heart rate and the strength of each pump.
- There is an association between stress and hypertension (high blood pressure). People who experience chronic high blood pressure may develop damage to the inner lining of their blood vessels.
- Emotional effects of stress alter the rhythm of the heart.

- Stress causes blood to become stickier which increases its clotting ability and the likelihood of a complete block of an artery.
- Stress impairs clearance of fat molecules in the body and raises blood cholesterol at least temporarily.
- Chronic stress may lead to the production of chemicals called cytokines. These cytokines produce an inflammatory response, which is responsible for injuries to the arteries that contribute to heart disease.

Shift work

Shift work leads to disruptions in circadian rhythms (sleep and awake cycle), poor lifestyle choices, and more occupational stress. Disruption of normal sleep rhythm has been linked to a number of cardiovascular risk factors including high blood pressure, increased heart rate, and changes in hormone production affecting the nervous system.

Environmental Conditions

Extreme temperatures (heat, cold, humidity), loud noises, chemicals (solvents, carbon monoxide, etc), hand-arm vibration, whole body vibration, and electromagnetic fields for people with pacemakers are all risk factors for a heart condition.

Is Your Workplace Heart Healthy?

- Do you have any of the risk factors for a heart condition mentioned in the opening paragraph?
- Do you feel as though your job is placing you at an increased risk for a heart condition or event?

If so, you must consult your physician and your employer to determine what modifications you must make and how to change your workplace.

For more information on workplace factors that can stress your heart, please contact OHCOW for more information or a copy of our fact sheet.

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