Resting heart rate can predict heart attacks in women

4 February 2009

A simple measurement of resting pulse predicts coronary events in women independently of physical activity and common risk factors, such as smoking and alcohol consumption, finds a study published on bmj.com today.

Previous studies have shown that resting heart rate predicts coronary events in men. But, for women, the relationship between heart rate and coronary events or stroke remains uncertain.

So researchers in the USA assessed resting heart rate in 129,135 postmenopausal women with no history of heart problems. Risk factors that might be expected to affect heart rate, such as high blood pressure, high cholesterol levels, smoking and alcohol intake were taken into account at the start of the study. The women were monitored for an average of 7.8 years, during which time all hospital stays and coronary events were recorded.

During the study period, 2,281 coronary events (heart attacks and coronary deaths) and 1,877 strokes occurred.

Women with the highest resting heart rate (more than 76 beats per minute) were significantly more likely to suffer a coronary event than women with the lowest resting heart rate (62 beats per minute or less).

Further analysis showed that this association was independent of physical activity, did not differ between white and minority women, or those with or without diabetes, but was stronger in women 50-64 years of age than among women 65 years or older.

There was no such relationship between resting heart rate and stroke.

Resting heart rate is a simple, inexpensive measurement that independently predicts heart attacks and coronary deaths, but not stroke, in postmenopausal women, say the authors. Although the strength of this association is less than cigarette smoking or diabetes, it may be large enough to be clinically meaningful, they conclude.

Source: British Medical Journal