



## Fewer Heart Attacks During Weekends, Summer Vacation



New research supports evidence showing that stress is related to a higher risk of myocardial infarction (MI) – i.e., heart attack. In the new nationwide registry study of 156,000 people of the Swedish population, the daily incidence rate of MI was higher during the winter holidays, and on Mondays, whereas rates were lower during weekends and during the summer vacation in July. These periods coincide well with perceived high and low stress in society, respectively.

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The study published in the American Heart Journal was conducted by researchers from Uppsala University and Umeå University, using novel high-quality data from the national registry SWEDEHEART.

"This is the first study that investigates these culturally defined time-periods in the Swedish population with unselected, high-quality data. Data allowed us to separately investigate both symptom start and hospital admission dates with predefined hypotheses. Previous studies have often lacked symptom start and discussed their results in terms of a delay in seeking appropriate care or delay of registration as explanatory for the MI rate variation over time. We found that such factors seem to explain only a part of the variation," said John Wallert, PhD-student and first author of the article.

When data were adjusted for various factors (e.g., temperature, air pollution, and overseas travel by air), the associations of calendar periods with MI rates are surprisingly robust. It should be noted that this is an observational study, so we need to be cautious with our conclusions, Wallert said, adding the systematic variation in MI rates is likely multifactorial.

Previous studies have suggested that highly stressful events, such as earthquakes and World Cup soccer games, may trigger myocardial infarction. Stress triggering of MI might also be related to working life, for instance MI rates peak on Mondays and in the morning.

"To scrap the work-week routine would probably be way too drastic. How we in society have agreed on periods of work and rest is actually quite well aligned with our predisposed, internal biological clock, the circadian rhythm. However, the alignment is not perfect. For instance, our internal clock is highly unlikely to be aware if today is a Monday or a Sunday," Wallert explains.

Researchers also reported an interesting sub finding: out of eight subgroups, the group that was still employed had the greatest increase in MI rates of all, about 20 percent compared to control days. "This and other findings

might have a bearing on future public health and clinical policy," says Wallert.

Source: [Uppsala University](#)

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