

# Marathons cut risk of fatal vehicle crashes

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Organised marathons are not associated with an increased risk of sudden death, despite the media attention they attract. In fact, marathons lower the risk of fatal motor vehicle crashes that might otherwise have taken place if the roads had not been closed, finds a study in this week's Christmas issue of the BMJ.

Millions of people take part in organised sporting events on a regular basis, yet the outcome for a few participants is sudden death. These deaths attract widespread media attention, such as the high publicity given to deaths that occur in marathon runners.

In contrast, sudden deaths from motor vehicle crashes occur more than a hundred times each day in the United States alone and tend to be under-reported in the media.

Yet no previous study has explored the extent to which marathons might actually decrease mortality.

So researchers examined marathons throughout the US to test whether the total number of sudden deaths changed when roads were closed to traffic and opened to marathon running.

They randomly selected 26 established marathons involving more than 3 million participants over a period of 30 years. Each marathon had at least 1,000 participants and took place on United States roadways from 1975 to 2004. Sudden cardiac deaths following each marathon were recorded and compared to motor vehicle deaths during the same hours

one week before and one week after each marathon.

The same comparisons were then replicated for state counties that were outside the marathon route to check for spillover in traffic flow.

Over the 30 years there were 26 sudden cardiac deaths, equivalent to a rate of 0.8 per 100,000 participants or about two deaths per million hours of exercise. But because of road closure, 46 motor vehicle fatalities were prevented, equivalent to almost two lives saved that would have otherwise occurred.

The reduced risk could not be explained by re-routing traffic to other regions or days and was consistent across different parts of the country, decades of the century, seasons of the year, days of the week, and race characteristics.

The data show that the final 1.6 km of the marathon accounts for almost half of the sudden cardiac deaths, so the authors suggest the last half of the marathon (and the last 1.6 km in particular) is the priority for paramedic staffing and ambulance preparedness.

The results also indicate that, for participants, the final sprint with sudden cessation may be more dangerous than generally realised, they conclude.

Source: British Medical Journal

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