

No evidence to support giving oxygen to people having a heart attack, research shows

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(Medical Xpress)—For 100 years inhaled oxygen has been a standard treatment for those with a suspected or confirmed heart attack. The latest research, was led by academics from City University London and the University of Surrey, suggests that oxygen therapy may be doing more harm than good.

More than seven million people – worldwide - die each year from coronary heart disease (CHD) and it is now the leading cause of death in the UK and US. A heart attack, or acute myocardial infarction, is often the first manifestation of CHD and a timely and appropriate intervention can make a significant difference to mortality rates.

However, more than three years on from their first call for further research on the use of oxygen therapy, there are still wide variations in practice and the possibility that patients are either being harmed or deprived of benefit.

Professor Tom Quinn, from the University of Surrey, comments: "While the changes to international guidelines for heart attack following our 2010 review are welcome, this new review suggests that we still do not have an evidence-based answer, based on an adequately powered and well conducted randomised trial, to confirm to clinicians and patients the role of oxygen therapy in [heart attack](#) treatment. It is likely that a global collaboration will be required to deliver such a trial."

Professor Amanda Burls, from City University, said: "Our first review in 2010 on this topic called for more research to find out whether oxygen was useful or harmful.

"While the [review](#) had a huge impact on practice, with many national and international guidelines

changing from recommending routine use of oxygen to recommending it not to be used routinely, funding to run a trial to settle this important uncertainty has not yet been forthcoming."

The latest research, published as a Cochrane Review was conducted by academics from City University London, the University of Birmingham and the University of Surrey, together with colleagues in Spain. They systematically searched for all high quality randomised controlled [trials](#) that compared oxygen and air and undertook a meta-analysis. The findings highlight the continued shocking paucity of the research behind this intervention that has been given to millions of people.

- Only four trials of oxygen were available which had enrolled a total of 430 participants
- There were 17 deaths in total and more than twice as many people given oxygen died compared to those given air in these trials.
- This result is not statistically significant but shows a clear need for more research into the use of [oxygen therapy](#) for the treatment of acute myocardial infarction.

Currently the number of participants involved is too low to enable conclusions about the effectiveness or harms of oxygen to be drawn.

Professor Amanda Burls, believes it is a question that is vital to research: "The difference in survival rates in these studies may simply be down to chance and is inconclusive but, what evidence there is, does suggest that far from being of help the use of oxygen may in fact be harmful.

"We believe that there is an urgent need for an adequately powered randomised controlled trial to establish the effectiveness of, or harm from, the

administration of [oxygen](#) to people with an [acute myocardial infarction](#)."

Provided by University of Surrey

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