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Trial results 'do not support the use of general health checks', warn experts

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Researchers have found that routine general health checks, which have become common practice in some countries, do not reduce the number of deaths from cardiovascular disease or cancer. They do, however, increase the number of new diagnoses.

Health checks were defined as screening for more than one disease or risk factor in more than one organ system offered to a general population unselected for disease or risk factors.

Health checks were introduced with the intention of reducing morbidity and prolonging life and there are many potential benefits, including: detection of both increased risk factors and precursors to disease (thus preventing cancer from developing); counselling on diet, weight and smoking; reassuring healthy people thus reducing worry about potential disease.

However, screening healthy people can be harmful and can lead to overdiagnosis and overtreatment, a topic which was featured in the *BMJ* in October. The researchers also point out that invasive diagnostic tests may cause harm. Being labelled as having a disease may also negatively impact healthy people's views of themselves and their health behaviour.

Few of the individual tests commonly used in health checks have been adequately studied in trials and it is not clear whether they do more harm than good. When tests have been studied in trials, the results have been varied. Authors from the Nordic Cochrane Centre in Denmark therefore

carried out a review of a total of 14 trials that looked at systematic health checks. The studies had between 1 and 22 years of follow-up.

Nine of the 14 trials had data on mortality and included 182,880 participants, 11,940 of whom died during the study period. 76,403 were invited to health checks and the remainder were not. All participants were over 18 years old and the study excluded trials specifically targeting older people or trials that only enrolled people aged 65 or over.

Despite some variation regarding the risk of death from cardiovascular disease and cancer, no evidence was found for a reduction of either total mortality, cardiovascular mortality, or cancer mortality. Unsurprisingly, the researchers found that health checks led to more diagnoses and more medical treatment for hypertension, although this was infrequently studied.

The lack of beneficial effects indicates that the interventions did not work as intended in the included trials. Health checks are likely to increase the number of diagnoses, but in the absence of benefits, this suggests over-diagnosis and overtreatment.

The researchers also note that people who accept a health check invitation are often different from those who do not, so the checks might not reach those who need prevention the most. Plus, many physicians already carry out testing for cardiovascular risk factors or diseases in patients that they judge to be at risk when they see them for other reasons.

In conclusion, the results do not support the use of general health checks aimed at the general population. The researchers say that further research should "be directed at the individual components of health checks e.g. screening for cardiovascular risk factors, chronic obstructive pulmonary disease, diabetes, or kidney disease".

In an accompanying editorial, Professor Macauley, Primary Care Editor at the BMJ, agrees that although health checks are "seductive" and "seem sensible" there is little evidence to show that they reduce morbidity and mortality. As well questioning whether they do more harm than good, Dr Macauley says that Krogsbøll and colleagues' study finds that "regular health checks are ineffective" and show "evidence of little effect" and adds that policy should be based on "wellbeing rather than […] well meant good intentions".

More information: General health checks in adults for reducing morbidity and mortality from disease: Cochrane systematic review and meta-analysis, *BMJ*.
Editorial: The value of conducting periodic health checks, *BMJ*.

Full Text
Editorial (subscription or payment may be required)

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