

# Screening and preventive medication

Worthwhile medical screening requires, among other considerations, an available intervention that achieves a better personal outcome for the disorder being screened for than delaying intervention until after the disorder would have become clinically apparent in the absence of screening.<sup>1</sup> The intervention that follows screening can take many forms, one of which is preventive medication (sometimes referred to as preventive treatment or as chemoprevention in the context of cancer prevention).

For example, medication to reduce blood pressure and low-density lipoprotein cholesterol in people at high risk of cardiovascular disease confers a large health benefit, but there is debate over how they should be selected for this intervention.<sup>2,3</sup> Research on its safety and efficacy is already available. The main challenge now is to provide better access to the preventive medication. In other areas, such as cancer prevention, more research is needed. While tamoxifen and anastrozole can prevent breast cancer,<sup>4</sup> an important research area is to determine the categories of women who should receive these drugs prophylactically. Metformin, widely used in the treatment of type 2 diabetes, may also prevent certain cancers, but this needs to be demonstrated, and the individuals who will benefit need to be defined.<sup>5</sup> Aspirin helps to prevent various disorders, including myocardial infarction, ischaemic stroke, and colon cancer, but the assessment of those at sufficient risk to warrant taking aspirin remains unclear.<sup>6</sup>

Determining who stands to benefit from preventive medication requires knowledge that is based on scientific evidence and quantification of the benefits and harms. With this knowledge, the public could make an informed choice on whether to take the medication.

The Journal of Medical Screening encourages the submission of papers on the criteria for screening people to

determine who would be eligible for preventive medication and on the efficacy and safety of such a screening programme.

## Declaration of conflicting interests

Nicholas Wald jointly holds European and Canadian patents (EU1272220 priority date 10 April 2000) and a US patent (8470868, 25 June 2013) for a combination pill for the prevention of cardiovascular disease and has an interest in its development.

## Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

## References

1. Wald N and Law M. Medical screening. In: Warrell DA, Cox TM and Firth JD, (eds). *Oxford textbook of medicine*. 5th ed. Oxford: Oxford University Press, 2010, 94–108.
2. JBS3 Board. Joint British Societies' consensus recommendations for the prevention of cardiovascular disease (JBS3). *Heart* 2014; 100: ii1–ii67.
3. Wald NJ and Morris JK. Quantifying the health benefits of chronic disease prevention: a fresh approach using cardiovascular disease as an example. *Eur J Epidemiol* 2014; 29: 605–612.
4. Cuzick J, Sestak I, Forbes JF, et al. IBIS-II investigators. Anastrozole for prevention of breast cancer in high-risk postmenopausal women (IBIS-II): an international, double-blind, randomized placebo-controlled trial. *Lancet* 2014; 383: 1041–1048. (Erratum in: *Lancet* 2014; 383: 104).
5. Pollak MN. Investigating metformin for cancer prevention and treatment: the end of the beginning. *Cancer Discov* 2012; 2: 778–790.
6. Cuzick J, Thorat MA, Bosetti C, et al. Estimates of benefits and harms of prophylactic use of aspirin in the general population. *Ann Oncol* 2015; 26: 47–51.

*J Med Screen*  
2017, Vol. 24(4) 169  
© The Author(s) 2016  
Reprints and permissions:  
sagepub.co.uk/journalsPermissions.nav  
DOI: 10.1177/0969141316650712  
journals.sagepub.com/home/msc



**Nicholas J Wald, Editor**

*Wolfson Institute of Preventive Medicine, Barts and the  
London School of Medicine and Dentistry, Queen Mary  
University of London, Charterhouse Square, London  
EC1M 6BQ, UK.*

*Email: n.j.wald@qmul.ac.uk*