

## **Public interest in genetic testing for susceptibility to heart disease and cancer: a population-based survey in the UK**

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### **Introduction**

Most common diseases such as heart disease and cancer have a genetic component acting together with environmental factors. Substantial research is underway into the genetics of these diseases.

It is recognised in the public health sector that genetic tests for multifactorial diseases will not be available clinically for at least 5-10y. However some commercial companies are already developing and marketing genetic tests for multifactorial diseases to the general public. There is some concern over the clinical validity of these tests. There is also lack of research into public demand and attitudes into genetic testing for complex diseases.

### **Issue addressed in paper**

In this study, the first of its kind in the UK, public interest in genetic testing for coronary heart disease (CHD) and cancer was investigated. A nationally representative sample of 1,960 adults were surveyed as part of an Office for National Statistics Omnibus Survey.

### **Summary of findings**

69% of respondents expressed an interest in being tested for genetic susceptibility to CHD. 64% of respondents expressed an interest in genetic testing for susceptibility to cancer.

Results were analysed for the following variables:

#### **Gender**

- Men were slightly more interested than women in genetic testing for CHD (72% vs 68%).
- Men were also more interested in testing for cancer risk than women (67% vs 62%).

#### **Age**

- Adults in the oldest age groups were least interested in genetic testing for CHD and cancer (76+ age group expressed least interest).
- Interest was also low amongst younger adults.
- Interest was highest in mid life age groups (46-60 expressed maximum interest).

#### **Education**

- The relationship between education and interest is curvilinear – people at the highest and lowest end of the educational spectrum least interested in testing.

#### **Family history (FH)**

- People with a FH of CHD were more interested in testing than those without (74% compared to 67%).
- There was no relationship between FH and interest in genetic testing for cancer (66% of those with a FH compared to 63% without).

#### **Strengths and limitations of study**

- **Strengths:** The sample was recruited from across the country and therefore a broad range of the sociodemographic spectrum was represented. Genetic questions were asked as part of an established survey for a wide range of issues therefore agreement or not to participate in the survey not influenced by knowledge of inclusion of these issues
- **Limitations:** Respondents were not provided with much information about genetic testing. Wording of questions may have led some people to believe testing was more imminent than it actually was. The link between stated interest and actual uptake is often not strong. There is therefore a need to examine factors associated with actual uptake of testing in the future.

#### **Conclusions**

The level of interest in testing was high therefore people may not be as fearful about knowing their genetic makeup as is suggested. This high level of initial interest from the general public highlights the need for public education around genetic testing for multifactorial diseases. There is considerable and justifiable concern about the commercial genetic tests for multifactorial diseases currently being marketed to the general public.