

# Warning about making health decisions based on 'over the counter' genetic tests

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Genetic tests sold online and in shops should not be used to inform health decisions without further scrutiny, say experts in *The BMJ* today.

They argue that finding a "health risk" via these tests often does not

mean that a person will go on to develop the health problem in question, while "reassuring" results might be unreliable.

Direct-to-consumer (DTC) genetic tests are advertised as a way to "find out what your DNA says," explain Anneke Lucassen, professor of clinical genetics at the University of Southampton and colleagues.

Some promise insights into ancestry or [disease risks](#), while others claim to provide information on personality, athletic ability, and child talent.

People might be drawn to DTC [genetic testing](#) in the hope that it will provide clear cut information about their future health. But the authors warn that interpretation of genetic data "is complex and context dependent" and DTC genetic tests might report false positive and [false negative results](#).

A false positive result indicates that a person has a high genetic risk of a disease or condition when they actually don't, while a false negative result indicates a person has a low genetic risk of a disease or condition when the person actually does have it.

Results found via third party interpretation services need particular care, they say. This is because the "raw data" that such services interpret will contain errors, and because the databases used to interpret the data may not be up to date.

When people receive a "bad news" result from a DTC genetic test, many will turn to their GP for advice, write the authors.

They advise doctors to put the results in context for their patients, discussing possible sources of error and, if appropriate, shifting the conversation from genetic risk to [lifestyle changes](#) that could help to reduce future disease risk.

However, for patients with a personal or [family history](#) suggestive of a genetic condition, doctors should refer to a clinical genetics service even if they have a reassuring DTC genetic test result.

**More information:** Practice Pointer: Direct-to-consumer genetic testing , [DOI: 10.1136/bmj.15688](https://doi.org/10.1136/bmj.15688) ,  
[www.bmj.com/content/367/bmj.15688](http://www.bmj.com/content/367/bmj.15688)

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