More than just BRCA determines breast cancer risk

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis.

Although testing women for *BRCA* mutations is now commonplace for women with a family history of the disease (see ‘Should all women be tested?’), the path between mutation and cancer is complex. Some studies show that the risk from *BRCA* mutations varies among different populations, suggesting that any particular woman’s fate depends on more than just her genes. Among women who carry the mutation, additional factors — including exposure to oestrogen — may shape the risk of disease. Understanding the interplay between genes and the environment could illuminate the ultimate origins of breast cancer, possibly leading the way to new strategies for prevention and treatment.

Some of the disparity in the risk from *BRCA* mutations is generational. One repeated finding is that, by age 50, mutation carriers born in the early twentieth century seem to have a lower risk of cancer than those born later. The pattern suggests that outside influences interact with genes, and that something in the environment has changed in an unfavourable way. If researchers can figure out what those influences are, and why they have increased disease prevalence, maybe in the future they will gain new, less invasive tools to delay disease onset — and possibly prevent hereditary cancers altogether.

Read full, original post: Genetics: Relative risk