BRCA RESEARCH SAVES LIVES

BRCA1 and BRCA2 (breast cancer susceptibility) are genes that help prevent breast cancer from developing. They are responsible for repairing defects in our DNA and maintaining our genes, which can prevent tumors from forming. When they are functioning properly, they are considered to be tumor suppressors. When mutations occur in the BRCA genes, their function is disrupted. They cannot effectively repair DNA damage, and defects accumulate, making cells more prone to cancer.

Everyone has BRCA1 and BRCA2 genes. Some people have an inherited mutation in one or both of these genes that increases the risk of breast cancer-called inherited breast cancer. However, not all people with a BRCA mutation will get breast cancer. BRCA mutations can also occur sporadically (not inherited).

Chances of Developing Breast Cancer by Age 70

- **55-65%**: BRCA1 Mutation
- **45-55%**: BRCA2 Mutation
- **7%**: NO BRCA Mutation

Learn more about BRCA and breast cancer [http://sgk.mn/Zq4Kmy](http://sgk.mn/Zq4Kmy)

**OUR RESEARCH INVESTMENT:**

(1982-2021)

**What We’re Investigating**

- Developing new ways to prevent breast cancer in people with a BRCA mutation.
- Identifying new drug targets to help overcome treatment resistance and stop breast cancer recurrence from inherited or sporadic BRCA mutations.
- Understanding how the immune system impacts treatment response in BRCA-mutant breast cancer to improve long-term outcomes.

[Learn more about breast cancer](https://www.susankomen.org/cancer-information)

[More Komen-funded Research Stories](https://www.susankomen.org/research)

[Get Involved & Support Komen Research](https://www.susankomen.org/get-involved)

**WHAT WE’VE LEARNED from Komen-funded research**

- Different populations have different BRCA mutations, which may affect their relative risk of developing breast cancer.
- Women from The Bahamas appear to be twice as likely to have a BRCA1 mutation than the general population.
- Newly identified risk factors may help predict which women with a BRCA mutation will get breast cancer.