Many studies have revealed that reproductive factors such as the number of pregnancies a woman has and whether or not she breastfeeds affect how likely she is to develop breast cancer, but few have investigated how race could impact risk.

African American women have the highest death rate for breast cancer in women under 70. In light of this statistic, it would seem that studies of breast cancer would involve large numbers of African American women. But in fact, the opposite is true.

Past studies of the relationship between reproductive factors and risk of breast cancer have been conducted primarily with white women, and these factors were highly indicative of how likely a woman was to develop a tumor. But studies involving African American women have been limited. Studies that were done seemed to indicate that number of pregnancies and age at first pregnancy had the same impact on all women, regardless of race, but that the effects of breastfeeding may differ. So how much does race really affect breast cancer, and why are African American women more likely to die from it? By conducting a study that involved both white and African American women, as well as women of different age groups, Ursin et al. came to the conclusion that risk of breast cancer decreased significantly with each pregnancy in all age and race categories, but since African American women were less likely to breastfeed and usually breastfeed for a shorter time period than white women did, they were less likely to benefit from the decreased risk of breast cancer that breastfeeding provided.

Scientists believe that women who have one or more complete pregnancies have a lower risk of breast cancer because of the dramatic hormonal changes pregnancy causes in the body, and especially in the mammary glands. It has also been shown that the more menstrual cycles a woman has in her lifetime, the more likely she is to develop breast cancer, because breast cancer risk is associated with lifetime exposure to estrogen. The number of times a woman is pregnant, and the length of time she breastfeeds after each pregnancy, will affect the number of menstrual cycles she has during her lifetime and therefore her risk of developing breast cancer. Other factors that may also lower risk because of decreased number of periods are late menarche (age at first period) and early menopause.

In their study, Ursin et al. interviewed a case group of 4,567 women (2,950 white and 1,617 African American) who had been recently diagnosed with invasive breast cancer, as well as a control group who had never been diagnosed with cancer. They collected information about reproductive history, medical history, family history of cancer, and other lifestyle factors such
as smoking, alcohol use and exercise, up to the date of the cancer diagnosis. The reproductive factors that were considered were whether a woman had ever been pregnant (gravidity), whether she had ever had a full-term pregnancy (parity), number of pregnancies and full-term pregnancies, and years since last full-term pregnancy. Other factors that were considered included whether a woman breastfed and the duration of breastfeeding. Odds ratios (ORs) were calculated based on responses, and data was analyzed separately for women older than 50 since risk factors appear to have greater affects in older women, possibly as a result of the onset of menopause.

The study found that, compared with women who had never been pregnant, young white women who had a full-term pregnancy had a 28% reduction in breast cancer OR, and older white women had a 23% reduction. The corresponding values for African American women were 10% and 11%. However, the study also found that the decrease in risk per pregnancy was virtually identical across racial groups. And as number of pregnancies increased, a woman’s risk continued to decrease in all age and racial groups. But late age at first birth was associated with an increased risk for breast cancer in white women only.

In addition to studying how pregnancies affected the women, the study also found that the protective effect associated with breastfeeding was greater in women who had given birth within the past five years. If they had breastfed for over 21 months, these women had a breast cancer risk decrease of 62%. Lactation may reduce the probability of developing breast cancer because it postpones the resumption of normal menstrual cycles after pregnancy. This study also found that on average, white women breastfed twice as long as their African American counterparts, and this may be an explanation for the decreased breast cancer incidence rates among young white women.

Finally, the study also found that older African American women had more children than older white women, as well as a decreased occurrence of breast cancer, but younger African American women were more at risk than younger white women. Ursin and colleagues concluded that if having a large number of children was a factor in lowering the occurrence of breast cancer in the older women, there may be an increase in breast cancer in older African American women over time since younger African American women had fewer pregnancies and also breastfed for shorter periods of time. They recommended that breastfeeding for a longer duration should be encouraged, especially among young African American women.

Overall, the study only found slight differences between the two races. But it was one of very few that actually involved a large number of African American women and compared them with white women, so it may pave the way for more studies involving different races and how pregnancy and lactation affect the risk of developing breast cancer.

While this study and others speculate on why pregnancy and lactation help lower the risk of breast
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cancer, the specific reason has not yet been pinpointed. And even though it is widely known that having more pregnancies and breastfeeding help protect against breast cancer, many women do not have the option of having many children or even breastfeeding for a long period of time. The good news is that this study finally showed that there is little difference between the two races regarding how much pregnancy and lactation can help prevent breast cancer, and it could help African American women lower their risk by breastfeeding for a longer period of time. But more studies need to be done to find the exact reason for the decrease in risk, and that may lead to a better understanding of treatment and prevention of breast cancer.

Reference: