

BREAST CANCER RISKS

Recently there has been much in the media about new research delineating the risks of getting breast cancer. I cannot overly emphasize the importance of women and men knowing these risks since reducing the incidence of the disease are important and, early diagnosis in all persons, especially those at high risk, markedly increases survival. While it would seem that we hear so much about breast cancer now it is tempting to think of it as a disease of modern times. It is true that we are living longer and as great inroads are being made to increase survival from trauma, childbirth, heart disease and diabetes, old age becomes a fertile ground for cancer because aging cells lose their ability to grow normally and to ward off toxins and insults that will be discussed here. Medical history is replete with annotations of breast cancer as long ago as 2500 b.c. when Queen Atossa of Egypt was in so much pain from breast cancer that she had a slave cut her breast off. The record indicates that she was in her late thirties. The Dark and Middle Ages record breast cancer and very grisly attempts at removal that did not cure the disease and most probably killed the patient from blood loss and pain. The discovery of ether by a dentist in the late 1800's ushered in the era of modern surgery under anesthesia. Halstead, the "father" of breast surgery was of the belief that the more radical the surgery the more likely the cure. He coined the term "radical mastectomy" in which the breast, chest muscles, lymph nodes of the armpit and sometimes even the clavicle and part of the shoulder were removed. Years later under strict scientific scrutiny there was no evidence that such a radical disfiguring procedure resulted in greater longevity for the cancer patient. Radiation therapy was discovered when cells exposed to huge doses of x-rays stopped growing in the lab. Chemotherapy had a complicated birth after it was discovered that soldiers exposed to nitrogen mustard gas in world war two had bone marrow suppression if they survived. After many studies and bold research the two modalities were combined so that today most treatment (in patients in which the tumor at the time of diagnosis has not spread beyond the chest) involved lumpectomy, radiation and various chemotherapeutic drugs. New research into gene treatment has resulted in adjuvant therapy in which types of antibodies are used to correct the genes that are so confused that they produce cancer. Survival rates are markedly improved and disfigurement and disability from surgery are rare.

But what of the risks? Forty years ago the standard teaching was that if a woman lived to 72 her risk was one in thirteen of getting breast cancer. Now it is one in eight. Once the entire human genome was mapped, there was the discovery of the BRACA 1 and BRACA 2 gene which if detected by a special test would predict an 80% chance of breast and/or ovarian cancer in women and prostate cancer in men. This is found in people of Eastern European origin especially Ashkenazi Jews of that region. However, it must be understood that only one in ten women who get breast cancer have that gene so that there must be other risk factors. Obesity (defined as a body mass index of greater than 30)

markedly increases the risk. It is not completely clear if this is from ingestion of fat laden foods (cultures such as Japan with low fat meals have low rates of breast cancer) or that of the hormone estrogen. Estrogen is the female hormone that is produced in the ovaries and in body fat. Possibly, more fat, more estrogen, more cancer. Woman frequently ask me for plant based estrogen products in the thought that if it is “natural” it must be less risky. There is no evidence to support that thought as plants contain isoflavones that in high doses pose the same risk. The known carcinogens in tobacco smoke increase the risk of breast cancer. Alcohol consumption is now identified as a risk with as little as 3-4 drinks/week being worrisome. The chemicals found in plastic bottles are now becoming known as risk factors and then there are environmental toxins in the air, water, and soil that are still under investigation. So, knowing these risks should alert people to avoid lifestyles that embody these risks. Be active, lose weight, don't smoke, drink alcohol in moderation, and eat healthy. If at least one sibling and mother or aunt have had breast cancer it worth inquiring about being tested for the BRACA gene although a fight with the insurance company is a given. Women should also be comfortable and frequent with their own breast exam and, if not, be taught by their health care provider. There is no doubt that annual mammography after age 40 with digital interpretation allows for earlier diagnosis and treatment. **Be aware of the danger signs: any breast lump, nipple discharge, especially if bloody, pain, or skin changes over the breast warrant exam. Knowledge is empowerment. As mentioned above, treatment though arduous need not be disfiguring and that there are many breast cancer survivors is an attestation to the joy of being with their loved ones and living long and productive lives.**