HOW BRAS CAUSE LYMPH STASIS AND BREAST CANCER

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When it was first announced back in 1995, the world was in shock. Bras cause breast cancer! You're kidding, right? How could this foundation garment that lifts and shapes the breast be a source of disease? If this was true, then why hasn't this information been announced before now by mainstream medicine? It must be false!

As medical anthropologists, we examine the cultural causes of disease. We became personally involved in our own breast cancer scare when Soma, my wife and co-researcher, discovered a lump in her breast. We were in Fiji at the time, and she was pregnant. The shock sent us back to the US in fear and anxiety as we desperately tried to figure out what she could have been doing to her breasts to have caused the lump. Soma was otherwise a healthy person. It made no sense that she would have breast cancer.

Looking for clues, we examined the red marks and indentations in her skin left by her bra. Most women experience these same signs of constriction. We had seen them every day, but ignored them as a normal part of bra-wearing. Now, they were clues into what might have caused Soma's lump.

When you think about it, the first thing to suspect when it comes to foot disease are shoes. If you are having breathing problems, the first thing to suspect is smoking. And when it comes to breast problems, the first thing to suspect is the bra.

We discovered that doctors knew bras were causing breast cancer as far back as the 1930's. For example, Dr. John Mayo, one of the founders of the Mayo Clinic, wrote in the article "Susceptibility to Cancer" in the 1931 *Annals of Surgery,* that "Cancer of the breast occurs largely among civilized women. In those countries where breasts are allowed to be exposed, that is, are not compressed or irritated by clothing, it is rare." A bra patent in 1950 stated, "Even in the proper breast size, most brassieres envelop or bind the breast in such a fashion that normal circulation and freedom of movement is constricted. Many cases of breast cancer have been attributed to such breast constriction as caused by improperly fitted brassieres."

The problem caused by bras is due to their constriction of the breasts, particularly of the lymphatic system, which is responsible for eliminating toxins, cancer cells, bacteria, viruses, and cellular debris from the breasts. The lymphatics are an essential circulatory pathway of the immune system. Constrict the microscopic, easily compressed lymph vessels with tight bras, and the result is lymph fluid congestion in the breasts, or lymph stasis, along with tissue toxification. This can cause breast pain and cysts (which are filled

with this lymph fluid). Over time, as the breasts progressively become toxic from impaired lymphatic drainage, cancer could result.

Realize that the lymphatic system is our immune system's circulatory pathway leading from the tissue spaces to lymph nodes, which screen the lymph for signs that an immune response is needed. The lymph fluid starts around the cells and drains the tissue spaces of fluid and any bacteria, viruses, cancer cells, toxins, and cellular debris. The nodes are factories for white blood cell production, to fight any detected infections or developing cancer cells. The lymph ultimately returns to the blood stream. Interfering with this pathway results in lymph stasis, a stagnation of the lymph fluid that results in various diseases, including cancer. Sometimes this lymph stasis is obvious to see, as with lymphedema and swollen tissue. At other times, lymphedema could be mild but chronic and cumulative.

Recently, pathologists have identified a new organ in the body that medicine never realized existed. It's proposed name is the "interstitium", and it consists of a lymph-fluid filled space that surrounds cells and flushes fluid to the lymphatics, acting as a pre-lymphatic space. This space was not previously recognized because the method of tissue examination destroyed it. Modern probes can be inserted into living tissue and observe this space. Cancer cells travel through the interstitium, making its flow important for cancer prevention and recovery. Of course, obstructing the interstitium with tight bras would impair lymph flow, causing lymph stasis.

In addition to tissue toxification from reduced lymphatic clearance, another problem caused by lymph stasis is that cancer cells and their immune markers cannot easily get to the lymph nodes. This poor communication between the tissues and the lymph nodes results in reduced immune response to cancer, and increased tumor growth, as recent dermatology studies show. Keep in mind that the breasts are accessory skin organs.

In a 2014 paper in the journal *Clinical Dermatology*, entitled, "Lymphedema and subclinical lymphostasis (microlymphedema) facilitate cutaneous infection, inflammatory dermatoses, and neoplasia: A locus minoris resistentiae", the author explains, "Chronic lymph stasis has numerous consequences, including lipogenesis, fibrosis, inflammation, lymphangiogenesis, and immunosuppression. For example, lymphedema's disruption of immune cell trafficking leads to localized immune suppression, predisposing the area affected to chronic inflammation, infection (cellulitis and verrucosis), and malignancy (angiosarcoma and nonmelanoma skin cancer)."

In other words, lymph stasis in the breasts reduces the ability of the immune system to fight cancer cells. Other researchers have discovered that surgical damage to the lymphatic system promotes tumor growth by this mechanism. For example, in the 2017 study in the *Journal of Dermatological Science*, called, "Surgical damage to the lymphatic system promotes tumor growth via impaired adaptive immune response", the authors conclude, "These results strongly indicate that surgical damage of the lymphatic system may promote tumor progression via impaired adaptive immune response."

A 2018 article published in the Journal of Dermatological Science, called, "Lymph stasis promotes tumor growth", echoes that 2017 study's findings.

> These findings come as no surprise to us who for a long time have been aware that alterations in regional lymphatic flow may produce dysregulation in skin immune function and consequent oncogenesis. In fact, since 2002, our team has held the view that lymphedematous areas are immunologically vulnerable sites for the development of neoplasms as well as infections and immune-mediated diseases. In recent years, increasing evidence has confirmed this assumption…. several other cutaneous malignancies have been reported to appear in the presence of lymph stasis, such as basal cell carcinoma, squamous cell carcinoma, Merkel cell carcinoma, melanoma, malignant fibrous histiocytoma and lymphoma. Further evidence of the oncologic vulnerability of lymphedematous regions ensues from the occurrence of multiple skin malignancies in the presence of lymph stasis. More than 20 basal cell carcinomas occurred on a patient's leg after recurrent erysipelas and chronic lymphedema…. In simple words, lymph stasis functionally means immune stasis.

When regions of the skin (or breasts) become immunocompromised it is termed an immunocompromised cutaneous district, or ICD. In the 2014 article, "The immunocompromised district in dermatology: A unifying pathogenic view of the regional immune dysregulation", in the journal *Clinical Dermatology*, the author explains,

> The factors responsible for localized immune dysregulation are multifarious, being represented by chronic lymphatic stasis, herpetic infections, ionizing or ultraviolet (UV) radiations, burns, all sorts of trauma (especially amputation), tattooing, intradermal vaccinations, and others of disparate nature (eg, paralytic stroke, poliomyelitis). Whatever the cause, in time an ICD may become a vulnerable site, prone to developing opportunistic infections, tumors, or dysimmune reactions (often of granulomatous type), strictly confined to the district itself… The pathomechanisms involved in this sectorial immune destabilization may reside in locally hampered lymph drainage that hinders the normal trafficking of immunocompetent cells.

It should be explained that these studies have not considered the bra as a cause of lymph stasis of the breasts. That conclusion is logical from these skin studies. Tight clothing impairs the interstitium and the lymphatic vessels, which is evidenced by seeing indentations and marks in the skin. This compression of the tissues impairs lymphatic function and immune competence.

As research into the interstitium and lymph stasis progresses, it is hoped that pathologists can look up from the microscopic view of the human body to see the macroscopic way we treat our bodies, which is all conditioned by our culture. Human beings are not merely biological units. Our biology is modified by our culture and the things it leads us to do, such as wear tight clothing to alter body shape. You cannot change shape without changing lymphatic flow, since pressure must be constantly applied to soft tissue to achieve the desired shape.

This pressure impairs lymph flow and increases cancer risk, along with the creation of other diseases of constriction. For the breasts this includes pain and lymph-fluid-filled cysts. It also makes the breasts heavy with lymph, resulting in increased breast droop. Women who stop wearing bras report rapid improvement in breast health, including reduced pain and cysts, and a lifting and toning of the breasts.

Clearly, further research is needed to better demonstrate the impact of chronic clothing constriction on the body. In the meantime, women should be warned about the hazards of tight bras, and all people should consider the tightness of their clothing and undergarments.

References and further reading:

1991 Harvard study (CC Hsieh, D Trichopoulos (1991). Breast size, handedness and breast cancer risk. European Journal of Cancer and Clinical Oncology 27(2): 131-135.). This study found that, "Premenopausal women who do not wear bras had half the risk of breast cancer compared with bra users…"

1991-93 U.S. Bra and Breast Cancer Study by Singer and Grismaijer, published in Dressed To Kill: The Link Between Breast Cancer and Bras (Second Edition, Square One Publishers, 2018). Found that bra-free women have about the same incidence of breast cancer as men. 24/7 bra wearing increases incidence over 100 times that of a bra-free woman.

Singer and Grismaijer did a follow-up study in Fiji, published in Get It Off! (ISCD Press, 2000). Found 24 case histories of breast cancer in a culture where half the women are bra-free. The women getting breast cancer were all wearing bras. Given women with the same genetics and diet and living in the same village, the ones getting breast disease were the ones wearing bras for work.

A 2009 Chinese study (Zhang AQ, Xia JH, Wang Q, Li WP, Xu J, Chen ZY, Yang JM (2009). [Risk factors of breast cancer in women in Guangdong and the countermeasures]. In Chinese. Nan Fang Yi Ke Da Xue Xue Bao. 2009 Jul;29(7): 1451-3.) *This article found that NOT sleeping in a bra was protective against breast cancer, lowering the risk 60%.*

2011 a study *was published, in Spanish, confirming that bras are causing breast disease and cancer. It found that underwired and push-up bras are the most harmful, but any bra that leaves red marks or indentations may cause disease.*

2014 Lymphedema and subclinical lymphostasis (microlymphedema) facilitate cutaneous infection, inflammatory dermatoses, and neoplasia: A locus minoris resistentiae. Clin Dermatol. 2014 Sep-Oct;32(5):599-615.

2015 Comparative study of breast cancer risk factors at Kenyatta National Hospital and the Nairobi Hospital J. Afr. Cancer (2015) 7:41-46. *This study found a significant bra-cancer link in pre-and post-menopausal women.*

2016 Wearing a Tight Bra for Many Hours a Day is Associated with Increased Risk of Breast Cancer Adv Oncol Res Treat 1: 105. *This is the first epidemiological study to look at bra tightness and time worn, and found a significant bra-cancer link.*

2016 Brassiere wearing and breast cancer risk: A systematic review and meta-analysis World J Meta-Anal. Aug 26, 2015; 3(4): 193-205 *"This systematic review and meta-analysis aimed to evaluate the association between 8 areas of brassiere-wearing practices and the risk of breast cancer. Twelve case-control studies met inclusion criteria for review. Although the meta-analysis shows statistically significant findings to support the association between brassiere wearing during sleep and breast cancer risk, evidence was insufficient to establish a positive association between brassiere wearing (duration and type) and breast cancer risk. A large-scale epidemiological study is needed to examine the relationship between various forms of brassiere exposure and breast cancer risk."*

2016 Lymphatic Vessels, Inflammation, and Immunity in Skin Cancer Cancer Discov. 2016 Jan; 6(1): 22–35.

2017 Surgical damage to the lymphatic system promotes tumor growth via impaired adaptive immune response Journal of Dermatological Science April 2018Volume 90, Issue 1, Pages 46–51 *"These results strongly indicate that surgical damage of the lymphatic system may promote tumor progression via impaired adaptive immune response."*

2018 Mechanical forces in skin disorders Journal of Dermatological Science Available March 2018 *"Mechanical forces are known to regulate homeostasis of the skin and play a role in the pathogenesis of skin diseases….Acral melanoma predominantly occurs in the weight-bearing area of the foot suggesting the role of mechanical stress. Increased dermal stiffness from fibrosis might be the cause of recessive dystrophic epidermolysis bullosa associated squamous cell carcinoma."*

2018 Lymph stasis promotes tumor growth Journal of Dermatological Science *"[t]hese findings come as no surprise to us who for a long time have been aware that alterations in regional lymphatic flow may produce dysregulation in skin immune function and consequent oncogenesis. In fact, since 2002, our team has held the view that lymphedematous areas are immunologically vulnerable sites for the development of neoplasms as well as infections and immune-mediated diseases. In recent years, increasing evidence has confirmed this assumption."*

2018 Structure and Distribution of an Unrecognized Interstitium in Human Tissues
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