

The Truth About Heart Disease And Cancer

Heart disease and cancer are closely intertwined due to the fact that cancer treatments put a risk for heart disease. Having cancer can predispose one to heart disease, the number one known killer. Not only does chemotherapy drugs affect the heart, but further research shows that cancer survivors are more likely to face heart and other cardiovascular diseases as these cancer therapy, chemotherapy and radiotherapy, tend to be toxic to heart muscles and organs as well as killing not only cancer cells but also other cells in the body.

Although at present the number seen on these cases are small, it presents a large potential future risk. Women who have been treated for breast cancer may even be at a higher risk since the treatment takes place close to the heart. However, some solutions may be coming, as a clinical trial for the FDA approved new ExAblate system for treating non-cancerous uterine fibroids is being studied as a treatment for breast and other cancers. This system combines magnetic resonance imaging and ultrasound that potentially makes it a more heart-friendly treatment for cancers and other tumors.

Another fact that links heart disease and cancer is that they are perhaps two of the most feared problems in modern society. Emory University in Atlanta, GA scientists shows new research which sheds light on a new class of enzymes that may be both active in both of the illnesses. This enzyme converts oxygen to a destructive form called reactive oxygen and shows to play a role in abnormal cell growth in both heart disease and cancer. This destructive form reactive oxygen has been connected with damage to cells as well as damage to DNA.

The research studied a member of the new class of enzymes called Mox1 and found that it serves as a growth promoter to cells that produce the reactive oxygen. This oxygen in turn causes a quicker than normal division of cells, which is seen in some forms of heart disease and most common in cancer.

This abnormal cell growth results to a devastating effect in both diseases. In cancer it results to the formation of tumors, while in heart disease it results to the formation of plaques on vessel walls.

The experiment on Mox1 involved the cloning of the Mox1 gene which was inserted to mice cells. It showed that once inserted, the cells started to divide more quickly taking on the characteristic of abnormal cells. Tumors resulted when these cells were inserted into mice.

Before this research, reactive oxygen was not known as a causative agent for cancer and through the research it demonstrated that reactive oxygen can be a cause of cancer and the Mox1 enzyme can produce the reactive oxygen. However, scientists also found out that by removing reactive oxygen from the cells will reverse the process. They are hopeful that this new findings will lead to a new way of treating the two.

Source: <http://www.articlecircle.com>

About the Author

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