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Are There Ways to Prevent Cancer?

ANTI-CANCER STRATEGIES

How much do nutrition, environmental factors, exercise and psychoneuroimmunology play in the role of helping your patients prevent and manage cancer; perhaps more than you might think.

Welcome to the Clinician's Roundtable. I am Dr. Leslie Lundt, and with me today is Dr. David Servan-Schreiber. He is a clinical professor of psychiatry at the University of Pittsburgh School of Medicine and the cofounder of the Center for Integrative Medicine. He is also a founding member of Doctors Without Borders and continues to work in international crisis intervention.

DR. LESLIE LUNDT:

Welcome to ReachMD, David.

DR. DAVID SERVAN-SCHREIBER:

Thanks for having me, Leslie.

DR. LESLIE LUNDT:

David, your book is amazing. For those who haven't read it, it's called the Anticancer: A New Way of Live and of course you start off with telling your own story here. Could you share with our listeners please?

DR. DAVID SERVAN-SCHREIBER:

Sure, I mean I hope it doesn't happen to any of them. But you know, I was an NIH-funded scientist. I had an MR research lab at the University of Pittsburgh doing functional neuroimaging and one night one of the subjects slotted for the experiment didn't come, I didn't want to scanner time so I got into the scanner myself and that's how I discovered that I had a brain tumor, which was malignant.

DR. LESLIE LUNDT:

Wow! I can't even imagine what must have gone through your head, literally, your thoughts as you were looking at yourself on the scanner.

DR. DAVID SERVAN-SCHREIBER:

Right, you know, it wasn't in the plan. I was 31 years old, I had about 13 or 14 years of high post school education at that point and after a PhD in medical school, I was in middle of residency, you know, I had invested heavily into the future, the plan wasn't for it to stop right there, so I was in bit of a shock, as it

is in fact for most cancer patients the day they learn about it, it is often a pretty traumatic day.

DR. LESLIE LUNDT:

Hmm. Now one of the things you are right about, which is certainly my experience as well is that traditional treatment of cancer basically says that there is nothing you can do for yourself short of continue to make your appointments and do your chemotherapy or radiation therapy, but you found that to be not true.

DR. DAVID SERVAN-SCHREIBER:

Well, I've said from the start that I had conventional treatment and you know it saved my life and I have never advised anybody to try to shortcut that because to date there is nothing else that has the same track record of proven benefits of cancer so you know I had surgery twice, second time with a relapse, and I had 13 months of chemotherapy and it saved my life, but what I found is that at the end of chemotherapy, I had the same question that most of our patients have when they go through chemo and they are done is that they come back and they okay what can I do now to help myself so this doesn't come back and I got the answer that 99.9% of patients get even though I was a physician and it doesn't make any difference in that situation, I was told there is nothing you can do to live your life normally and we'll continue to do frequent screenings and if this comes back, we will catch it early next time.

DR. LESLIE LUNDT:

So what have you found out since?

DR. DAVID SERVAN-SCHREIBER:

Well, that got me a lot of motivation as a scientist, as a physician to hit the book and the medical literature and try to find anything I could about how I actually could help myself. It didn't seem right, you know, it didn't matter what I would do, what I found was stunning. I found that first of all everybody has cancer cells, yet only one in three of us, which is still a lot, but only one in three of us will develop cancer, so it's got to be that there are natural defenses against cancer, preventing these cells from becoming tumors for the vast majority of people. So if there are natural defenses against cancer, then I must have them too and I must learn how to develop them. Second thing I learned is that there is a huge literature showing that genes account for only at most 15% probably closer to 5 or 10% of cancers so that leaves us with the fact that at least 85% of cancers are due to things we have some control over, our environment and our lifestyle, and then I found out, there is a report, which was published last year from the World Cancer Research Fund for example that said that most cancers, their word that most cancers in the West are preventable. They talk about 40% of cancers being preventable just with dietary changes and increases in physical activity. That does not even count smoking cessation, alcohol reduction. With that on top, you can go up to 80% of cancers being preventable, which still doesn't even count in the changes in environmental contaminants.

DR. LESLIE LUNDT:

And tell us what you've learned about nutrition, for example.

DR. DAVID SERVAN-SCHREIBER:

Well, I've learned that there are a number of things in our dietary habits that have crept up since 1940, the Second World War. Around the same time, that the cancer epidemic really started to flare up in our country and some of these ingredients that kept coming up in our food are linked through cancer growth in the body. One of the main ones is, as surprising as this may be to many of our colleagues, is sugar. We find sugar, it turns out that cancer cells being abnormal cells, and they only feed on sugar. They can't feed on proteins or fat, they feed on sugar. In fact we use PET scans with radioactive glucose to detect the presence of cancer in the body because of that property and it also turns out that as we increase sugar consumption, which went from 12 pounds per person per year in the 1800s to 154 pounds per person per year in 2000 in America. As we increase sugar consumption, we make

blood sugar go up, which releases insulin and IGF-1 insulin like growth factor resulting in inflammation in the body, a low grade chronic inflammation that is bad for cancer multiplication and spread through metastasis.

DR. LESLIE LUNDT:

So it sounds like the obvious solution is to eat less refined sugar.

DR. DAVID SERVAN-SCHREIBER:

That's right, and not only you know the white sugar that we might put in our coffee, but of course the sugar that's in soft drinks, nobody realizes that in one can of Coca-Cola there are 15 packets of sugar of the type you find on the typical restaurant table. So you've to reduce that and also reduce white flour, white bread, white bagel, flour of muffins, and so on because white flour is very rapidly metabolized into glucose, which raises blood glucose and results in the same release of insulin and IGF that feeds cancer growth.

DR. LESLIE LUNDT:

So looking at the glycemic index of foods, that's an important thing.

DR. DAVID SERVAN-SCHREIBER:

Absolutely and in fact, you know the glycemic index of food is one of the best ways to control diet in terms of blood glucose, but I actually believe that soon you will see that every oncologist in the country within a few years would be monitoring hemoglobin A1c of their patients because you don't want a cancer patient to have an A1c that's above 5.4 really, because I think that's a sign that they are releasing too much insulin and IGF. IGF induces cell multiplication including cancer cell multiplication.

DR. LESLIE LUNDT:

If you are just joining us, you are listening to the Clinician's Roundtable on ReachMD, The Channel for Medical Professionals. I am Dr. Leslie Lundt, your host, and with me today is Dr. David Servan-Schreiber, the author of *Anticancer: A New Way of Life*. We are discussing the strategies described in his book to hopefully prevent cancer.

Back to nutrition again, David, does organic make a difference, we always encourage our patients to eat more fruits and vegetables, but should it be organic?

DR. DAVID SERVAN-SCHREIBER:

Well, this is a very common question and the quick answer to this is that it's much better to eat broccoli even if it has pesticide residues on it than to not eat broccoli, all of the studies concur on that point. What's important is to get those vegetables that contain anticancer phytochemicals like the sulforaphane, indol-3 carbinol of the whole cabbage family, broccoli, cauliflower, brussels sprouts, cabbage, and so on. It's much more important to get those in than the pesticide residues that might do in terms of damage, but if you can get organic, it's clearly better because there are also studies showing that kids, for example, that eat a conventional diet of vegetables and fruits and meats have levels of pesticide residues in their urine that for some of them may be 4 times higher than what is tolerated by the environmental protection agency or as when they move to a 75% organic diet, they no longer have this pesticide residues in their urine, so it does make a difference, especially if pesticides for the most part, are xenoestrogens meaning that they do key into the estrogen receptors and stimulate their actions in much the same way that natural estrogens do. In fact, the pesticide residues can change the sex of frogs in our rivers from male to female frogs.

DR. LESLIE LUNDT:

Now how about exercises? Of course, it makes sense that people are healthier, but what does the oncology literature say about exercise and connection with cancer?

DR. DAVID SERVAN-SCHREIBER:

In the couple of recent studies, very large ones leading to a fascinating commentaries in the Journal of National Cancer Institute, for example, showing that women who have had breast cancer if they walk 30 minutes 6 times per week and that could mean walking to work and back from work, these women have a 50% reduction in the risk of relapse from their tumor. This is enormous because the best drug we have for the prevention of relapse in breast cancer is Herceptin which works only for women who are HER/2 positive and doesn't do better than that. It reduces relapse rate by 50% and nothing prevents our patients from taking Herceptin and walking to work, so it is very important discovery, one that fits well with people who've been working with lifestyle modifications in health and disease and in cancer, who have known for a long time that patients who are healthier overall through nutrition, through exercise, tend to tolerate treatments better and to live longer anyway.

DR. LESLIE LUNDT:

Now, how about psycho-immunology, that's always a mouthful to say, what do we know about its impact on cancer prevention.

DR. DAVID SERVAN-SCHREIBER:

Well, in fact, you even skipped the "neuro," right.

DR. LESLIE LUNDT:

Yeah, it was too hard to say.

DR. DAVID SERVAN-SCHREIBER:

Well PNI is easier to say that has also made great strides in the last several years. There is a pretty good evidence that people, who meditate as a way to manage stress, for example, tend to have higher levels of circulating antibodies after a vaccination such as the flu vaccine, and that works not only in Tibetan monks, but in executives in a biotech company in Wisconsin where it was studied and they had learned how to meditate and practice once a day for 8 weeks, 8 weeks later they were spreading out more antibodies when injected with a flu vaccine than a control group. So there are effects of meditation on the immune system. We also tend to measure it in terms of the interleukins or cytokines that are secreted by people who meditate and people who don't, so we do see these kinds of effects and we understand better now how they come about.

DR. LESLIE LUNDT:

I loved what you wrote in your book about the commonalities between saying "Ave Maria," for example, and certain Buddhist sort of chanting. Can you tell us on that?

DR. DAVID SERVAN-SCHREIBER:

This was an interesting discovery in an Italian psychophysiology lab where the fellow was working on biological rhythms and he knew, of course, about the entrainment that the respiratory rhythm has on other rhythms such as the variation in cardiac rhythm and also the variation in blood pressure fluctuation or the velocity of blood flow through the carotid artery so he was looking at all these rhythms and he realized that he as a control task he had given people the task of reciting the Ave Maria in Latin which everybody knew by heart in his region of Italy in Lombardi, I think, and he realized that when people were doing that there was no better instruction to have them synchronize all of their physiological rhythms and then he learned that the Ave Maria came from Arab traders who itself had picked up rhythms that came from Buddhist mantras such as the "Om Mani Padme Hum" and he had people practice the Om Mani Padme Hum in his lab and he found that that too, because it induces a

breathing frequency of 6 per minute, induces the synchronization of all number of biological rhythms that are associated with better functioning of the immune system and so on.

DR. LESLIE LUNDT:

Amazing. Well, thank you so much for sharing your experiences with us today.

DR. DAVID SERVAN-SCHREIBER:

Thank you Leslie for having me.

DR. LESLIE LUNDT:

We've been speaking with Dr. David Servan-Schreiber about anti-cancer strategies. I am Dr. Leslie Lundt.

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