Saturated fats. Whether or not sat fats from non-meat sources (such as butter and dairy) absolutely increase cancer risk remains unclear. But since it's so easy to avoid sat fats, why not do it anyway? Saturated fats like hydrogenated oils are found in most conventional foods. These common foods are sold at health food marts in healthy-fat versions.

Preservatives, artificial colors, artificial flavors. If it's not natural, your body doesn't need it. Don't use the excuse, "It's in such a tiny amount, it won't hurt me," or, "I eat this only once a week." That "tiny amount" only "once a week" can, over time, create disturbances in your DNA, and DNA molecules are a lot smaller than that "tiny amount." Why take the chance?

Tap water. This can be full of contaminants, including pesticides. Use a water purifier.

Pesticide-treated foods. You cannot rinse all the pesticide residue off produce. It's been sprayed since it was a seedling, and the residue is inside the fruit, not just on skin. Some pesticides contain estrogen-like chemicals.

Don't hesitate to discuss change-in-diet plans with your physician or specialist. When in doubt, consult with a naturopathic doctor, holistic physician or other professional who can offer reliable information on "super foods," supplements, their dosing and interaction with other supplements and medications, and how they may affect your individual body chemistry.

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training cancer survivors in the gym

Many cancer patients needn't wait until their illness is in remission to engage in strength and cardio training, as long as exercise is custom-fit to their unique situation, and they have their physician's clearance.

Sami Papacek of Overland Park, KS, is a certified personal trainer and cancer exercise specialist and owner of Life in Focus. Her trainees have had breast, prostate, lung, ovarian, colon and skin cancer. The response that cancer patients have to exercise is wide-ranging.

Cancer patients already experienced with lifting weights. A program of bodybuilding and other forms of intense weight lifting will be more difficult to sustain for a person undergoing cancer treatment, than other types of exercise, such as cardio classes, Pilates, swimming and jogging. Papacek explains, "Since bodybuilding is a more intensive and predominately anaerobic activity, it is much more difficult to sustain when someone is going through treatment, both chemo and/or radiation." It's important that a cancer patient not cut back on complex carbohydrates; he or she needs this valuable form of fuel. Cancer and its treatment strain the body, and if exercise is added to that, then a higher intake of healthy carbs is in order.

If your trainee is interested in bodybuilding – even with a history of such – be aware that cancer treatment "causes the depletion of energy-yielding substances (phosphagens), glycogen and blood glucose," says Papacek. "Second, there is the accumulation of metabolites." Fatigue may come quickly for the bodybuilder or strength-trainer with cancer, since such a workout is primarily anaerobic. It's perfectly okay to keep your trainee – who's already experienced with weights – on lighter resistance and high reps, and add some completely new routines. This way, the body will get a surprising training stimulus without the threat of too much intensity.

Trainees with little strength-work background. Papacek explains, "I don't recommend anything too anaerobic during treatment unless they were very fit to begin with. For the average client, they will just get too tired. We want to keep them out of the glycolytic energy system (which weight-training relies upon), because it produces lactic acid which contributes to their fatigue. However, this is up to the trainer to determine safe levels for their clients. I will lower the weight, increase the reps and allow extra recovery and many clients will do just fine. It's not an absolutely can-do, but it is essential to monitor their fatigue."

If your trainee with cancer can get through a weight workout, then this will help reverse the muscle shrinkage that results from the cancer treatment. "For someone to continue to do strength training will keep them physically stronger for day-to-day activity, and tolerate treatments much better," says Papacek. "I know that there is starting to be a lot more research, but personally, I have definitely found this very true both on a physical and psychological level."

Guidelines for trainees finished with treatment who have not been exercising. Papacek says that when to resume working out is highly individual, contingent upon the trainee's exercise history, as well as how his or her body has responded to treatment. "The main thing is to not add to the fatigue level. I usually have them start with recumbent bike or slow treadmill (trainers should encourage a hands-free walk to involve the core and promote correct posture); whatever they prefer, and start to build their strength back up. If they are doing well with that, we add light strength training, usually with bands, (stability ball) core and stretching." Papacek also includes range of motion and functional training.

For these trainees, more demanding weight workouts shouldn't be added until at least another four to six weeks – depending on what kind of surgery they've had. It's important to keep communication open between all three parties: trainer, trainee and trainee's physician.

Breast cancer. "The way that muscle is affected in breast (surgery) is from the cutting of the nerves. A common issue that is a side effect of the mastectomy is the cutting of nerves under the armpit known as the brachial plexus. Side effects include winging out of the scapula, weak muscles in the posterior shoulder region -- including but not limited to the teres major and minor, limited range of motion, and weakness," says Papacek. Thus, weight routines that target the chest, shoulder and midback are very important for breast cancer trainees.

Exercise following breast cancer treatment may improve survival, and lower recurrence risk, according to study results in the *Journal of the American Medical Association* (May 25, 2005). The study said, "The women who exercised more than three MET hours each week reduced their relative risk of recurrence, compared to women who exercised less. Women who exercised more than three MET hours a week also improved survival, compared to women who exercised less."

More exciting research findings. "Resistance exercise significantly improves the symptoms and fatigue in both palliative or curative (cancer) patients," says study results published in the *Journal of Clinical Oncology* (2003, 21, 1653-1659). This study included leg extension, calf raises, leg curl, chest press, lat pull-down, overhead press, triceps extensions, biceps curl and modified curl-ups.

Radiation therapy creates toxicity to the cardiovascular, gastrointestinal and musculoskeletal systems. In another study, "It is shown that muscular strength and endurance significantly improved in cancer patients after undergoing a six-month exercise intervention." (*Integrative Cancer Therapies* 1[1] 2002, 76-82).