



October 18, 2015 – Grand Rapids, MI

## Exercise and Chemotherapy

The last study on exercise I'm going to look at this week examines the possibility of using exercise as training before chemotherapy.

Chemotherapy drugs are toxic to the body. The closer they can be designed for cancer cells without harming normal cells, the better, but we haven't advanced to the point where that's possible in every case. One chemotherapy, doxorubicin, is highly effective for some cancers, but it's toxic to the heart. Researchers split a group of rats into three groups. One remained sedentary, one was allowed to run on a running wheel in their cage whenever they wanted, and the final group trained by running on a treadmill. After five days, the rats were injected with doxorubicin at a dose high enough to cause cardiac damage.



After five days, researchers examined specific areas of the cardiac tissue and found there was less damage to the cardiac muscle in the exercising rats than the sedentary group. The researchers concluded that exercise should be examined further as an adjuvant therapy when doxorubicin is used as chemotherapy.

One rodent study certainly isn't definitive, but it does indicate that maybe we can train for treatment. There's usually time before surgery, radiation, or chemotherapy to prepare the body for the insult that's about to happen during treatment. They did not train these rats at high levels or for very long—just five days. They still got benefits. It doesn't mean that every treatment requires exercise training nor that exercise will benefit all treatments. But unless a doctor tells you it will do harm, I would consider doing it under the direction of your oncologist and physical therapist.

One more chance to see the [Nutrition During Cancer Treatment](#) webinar tomorrow at 10 p.m. ET. There are slots available and remember, if you can't attend live, you can watch a replay anytime during the next month. Just purchase the webinar and I'll automatically send you the replay link when the webinar is over.

What are you prepared to do today?

**Dr. Chet**

Reference: J Physiol Biochem. 2015 Sep 24.

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