

**CAN FASTING HELP TREAT CANCER? RESEARCH GIVES HOPE.**

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**Abstract**

The scientific world has recently become more interested in fasting as a possible therapeutic approach for cancer. Fasting and fasting-mimicking diets (FMDs) have shown great potential in controlling cancer progression, treating various cancers, and improving the outcomes of patients receiving anticancer therapy. The review of multiple studies conducted on several trials in this study indicates that fasting might make cancer cells vulnerable, protect normal cells from chemotherapy, and decrease growth signals associated with cancer such as IGF-1. Ongoing research provides hope that fasting protocols can safely be incorporated into a physician guided cancer treatment protocol, although additional human trials are warranted.

**Keywords**

Fasting, cancer, diet, metabolism, chemotherapy, IGF-1

**Introduction**

Fasting, or going without eating for a set amount of time, is no longer solely a religious or cultural custom. Researchers are currently investigating the potential benefits of fasting for cancer treatment. According to preliminary study, fasting may protect healthy cells during treatment, reduce the growth of cancer cells, and improve the efficacy of chemotherapy. This article summarizes some of the most significant scientific discoveries and discusses how fasting combats cancer.

## **How Fasting Affects the Body**

When you fast, your body enters a state known as "survival mode." It starts using stored fat instead of sugar as a source of energy. This results in decreased insulin, decreased blood sugar, and altered hormones such as IGF-1 (Insulin-like Growth Factor 1), which is involved in cell proliferation. To develop quickly, cancer cells require a lot of glucose and IGF-1. Therefore, cancer cells may find it difficult to survive when they are diminished, whereas healthy cells can adjust more readily.

## **Fasting Weakens Cancer Cells but Protects Healthy Ones**

One provocative study is that fasting weakens cancer cells and increases their susceptibility to chemotherapy and other treatments. In addition, it shields healthy cells from harm. We refer to this as "differential stress resistance." Mice that fasted prior to chemotherapy showed improved treatment outcomes and fewer adverse effects.

### An example study

According to a study by Dr. Valter Longo and colleagues, fasting for 48 hours increased the likelihood that cancer cells would die after chemotherapy while protecting healthy cells in mice (Raffaghello et al., Cell Cycle, 2010).

## **Lowering Growth Hormones Helps**

IGF-1, a growth hormone associated with an increased risk of cancer, is reduced by fasting. Tumor growth may be aided by elevated IGF-1 levels. Fasting reduces the progression of cancer via lowering IGF-1.

### An example study

People on long-term calorie restriction had lower IGF-1 levels and a lower risk of cancer, according to research published in Aging Cell (Fontana et al., 2008).

## **Fasting-Mimicking Diets (FMDs): A Safer Option**

Long-term fasting is difficult for some people. Researchers have created plant-based, extremely low-calorie fasting-mimicking diets (FMDs) that provide the body with the same advantages as fasting while permitting some food. These diets have proven beneficial in early human research and are simpler to adhere to.

### An example study

According to Brandhorst et al. (Cell Metabolism, 2015), FMDs enhanced immunological function, decreased cancer markers, and encouraged cell regeneration in both people and animals.

## **Human Trials Show Promising Results**

Short fasts before to chemotherapy decreased typical adverse effects such nausea, exhaustion, and weakness in a study of cancer patients.

### An example study

Patients with breast and ovarian cancer who fasted prior to chemotherapy felt better and tolerated treatment better than those who did not, according to a pilot research published in BMC Cancer (de Groot et al., 2015).

## **Fasting Is Not for Everyone**

Not everyone can safely fast. Unless directed by a physician, people who are underweight, have diabetes, are pregnant, or have major medical conditions should not fast. When contemplating fasting, cancer patients should always consult their physician first.

## **Conclusion**

Although it is not a miracle treatment for cancer, fasting may be useful in the future. It functions by putting cancer cells under stress, lowering growth signals, and shielding the body from harsh therapies like chemotherapy. The evidence thus far is encouraging, but further research is still required. One day, fasting or fasting-like diets could safely and effectively assist cancer care under medical supervision.

**References (Simplified)**

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