

Fasting's role in initiating Autophagy

Deborah Kennedy, ND PhD

Fasting is a practice that involves refraining from consuming food and sometimes beverages for a specific duration. There are different types of fasts, each with its distinct approach and purpose. Some of the more common types include:

1. **Water Fasting:** This involves consuming only water for a specified period, usually lasting one to three days.
2. **Intermittent Fasting:** Intermittent fasting restricts food intake to a specific daily time window, typically involving 16-20 hours of fasting and 4-8 hours of eating.
3. **Alternate Day Fasting:** In this approach, fasting occurs every other day, with some variations allowing limited calorie intake on fasting days.
4. **Religious Fasting:** Fasting is observed as a spiritual discipline in some religions, such as during Ramadan.
5. **Partial Fasting:** Certain foods are restricted during partial fasting.

What is Autophagy?

Autophagy is a natural cellular process that allows cells to clean up and recycle things inside themselves that are damaged or no longer useful. This includes breaking down cellular components like proteins and organelles. Autophagy is essential for keeping cells, tissues, and organs working correctly.

When we go without eating for a while, like during fasting, our body's nutrient and energy levels drop. Cells must find other ways to get the energy they need to function. One way they do this is by triggering autophagy, which lets them break down and recycle parts of

themselves to create energy and essential nutrients.

Here are some key reasons why autophagy matters:

1. **Cell Health:** Autophagy acts as a cellular cleaner, removing damaged or dysfunctional parts from within cells. This helps prevent the build-up of harmful stuff that can damage cells or cause them to die.
2. **Getting Energy from Recycling:** When food is scarce, autophagy helps cells recycle their own components to generate energy. It's like turning old stuff into new energy.
3. **Development and Growth:** Autophagy plays a role in how cells change and grow, particularly during development. It helps get rid of unnecessary or unwanted parts of cells as they develop.
4. **Disease Prevention:** When autophagy doesn't work correctly, it can contribute to various diseases, such as cancer, brain diseases, and problems with how our body handles energy. Scientists are exploring ways to control autophagy to treat these illnesses.

In summary, autophagy is a vital process that keeps our cells in good shape, helps them adapt during times of food shortage, supports development, and may hold the key to treating certain diseases.

Fasting can provide many benefits and it is important to check with your healthcare practitioner prior to initiating any new health care regime or practice.

Practitioners trained by the Metabolic Terrain Institute of Health take a scientific approach to working with patients who wish to implement fasting as a treatment option. It is essential to consult with a MATC Certified™ Practitioner to properly test, assess and address each patient before and during implementing therapeutic fasting interventions, or at the very least consult with a practitioner or health care provider familiar with your specific state of metabolic health. It is crucial to work with a certified practitioner and follow a proper fasting protocol, especially when implementing fasting alongside other treatments.

References:

Antunes, F. et al. Autophagy and intermittent fasting: the connection for cancer therapy? Clinics 73, e814s (2018).