Maintenance Masterclass

#### Lesson 5: Optimizing Autophagy

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#### Lesson 5 Outline

What is Autophagy? Autophagy: IR vs. IS Fasting Strategies



# What is Autophagy?

## What is Autophagy?

- Physiological phenomenon that is a form of cellular recycling.
- When "turned on" your body will breakdown old and damaged cells and reuse the old cell parts to help other cells function more optimally.
- Natural "clearing out" process.
- Occurs when your cells are stressed or deprived of nutrients.
- Induced by ketogenic diets, intense exercise and fasting.
- Fasting is the most powerful tool we have to date for inducing autophagy.

## Can You Measure Autophagy?

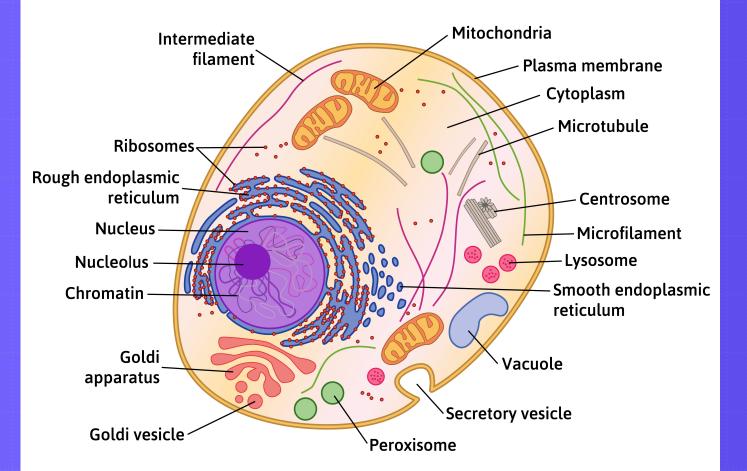
- It's a very complicated process that cannot be done in your doctor's office or local medical lab/hospital.
- Monitor certain existing health conditions and clinical observations.

## Examples of Common Observations

- Scars (i.e. c-section) disappear after years.
- No, or very little, loose skin after dramatic fat-loss while fasting.
- Fibroid shrinkage or disappearance.
- Improvement of certain neurological conditions may be attributed to this.

# Why is it important?

- It is an essential process for a cell to survive and function properly.
- It recycles old and damaged cells.
- Eliminates nonfunctional components of cells that negatively impact function.
- Can destroy harmful pathogens.



#### Other Potential Benefits of Autophagy

- Increase longevity: disease prevention and anti-aging.
- Prevent the accumulation of excess skin while losing significant body fat.
- Neurodegenerative disorders (i.e. Parkinson's, Alzheimer's).
- Certain cancers.
- Metabolic diseases (i.e. type 2 diabetes).

# Too Much Autophagy Carries Potential Risks!

Too much of a good thing can be just as if not more problematic that too little of it.

# Autophagy: IR vs. IS

#### Insulin Resistant vs. Insulin Sensitive

Duration: IS individuals can start to experience autophagy 8-

14 hours into a fast, whereas IR individuals start to experience

it around 20-24 hours.

 Weight-loss: you will see autophagy direct attention to the excess connective tissue (skin).

### Insulin Resistant vs. Insulin Sensitive, Continued

- IR individuals are typically fasting 24-48 hours, 2-3 times/week
- In IS individuals it's recommended to stick as close to water and salt as possible since therapeutic fasts are not as frequent.
- IS individuals can use fasting aides during extended fasts of 72+ hours if needed.
- IS individuals may require more salt and magnesium the first 24-48 hours of an EF after a holiday or vacation where eating is "off plan."

Maintenance Recap Therapeutic fasts are often limited to once a week, which is a lot less frequent compared to those fasting to reverse insulin related issues.

IS individuals may experience the benefits of autophagy as early as 8 hours into a fast.

Fasting less therapeutically but experiencing a fair amount of autophagy in a much shorter time (great for anti-aging and disease prevention!).

Advised to stick close to a water and salt fast on your therapeutic IF days and can use Epsom salts or magnesium oil.

It is OK to use fasting aides during extended fasts for autophagy.

# Fasting Strategies

#### Before We Get Started...

- Fasting is an incredible tool but it is no panacea.
- There are many factors that can contribute to disease development.
- This is not a guide for what to do if dealing with an active health issue or if one is to arise down the road.
- Fasting may be contradictory in certain circumstances. It's important to seek the guidance of a healthcare practitioner.

#### "Autophagy Fasting" In Maintenance

- 1. One 5-to-7 day fast per quarter.
- 2. One 3-day fast per month.
- 3. One 36-42 hour fast per week.
- 4. Can combine any of these strategies.



# ? ? 2 What Are Your Goals?

#### Autophagy: Mild Plan

## Quarterly 3 day fast.

#### Semi-annual or annually 5-7 day fast.

#### Autophagy: Moderate Plan



## Autophagy: Intense Plan

- Weekly: 36-42 hour fast.
- Monthly: 72 hour fast.
- Quarterly: substitute a monthly 72 hour fast for a 5-7 day fast.