

EUREST

Intermittent Fasting (IF)

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Agenda



What

What is IF



History

Where did IF
come from?



Research

What does the
research show?



How

How to
incorporate IF into
your life

What is Intermittent Fasting?

- Fasting – A period of voluntary abstinence from food and drink for health, religious, or ethical purposes
- Intermittent – occurring at irregular intervals; not continuous
- What is it?
 - A diet pattern that focuses on periods of fasting and periods of eating
 - There are several different ways to practice intermittent fasting
 - No true guidelines on *what* to eat, but *when* to eat
- Why?
 - Weight loss
 - Improve metabolic health
 - Fight disease
 - Live longer
- The theory is fasting supports your circadian rhythm
 - Circadian rhythm impacts metabolic function

Quick note

Intermittent fasting has become popular among athletes because of its touted athletic performance benefits

How Intermittent Fasting Works

- Pathophysiology of IF
 - The energy of choice for the body and brain is carbohydrates
 - They are easy to break down, provide quick energy, and help regulate levels of insulin
 - When there is excess carbohydrates, the body stores them as glycogen in the liver and muscles or as fat cells with the help of insulin
 - When there is no carbohydrates in the blood stream, insulin levels drop, which signal the body to start breaking down the glycogen and fat cells for energy
 - It takes up to 10 to 12 hours for glycogen stores to be depleted
 - This is why prolonged fasting is suggested

** Fasting for longer than a 24 hours period can actually lead to a reversal of the fat burning state and result in fat storage

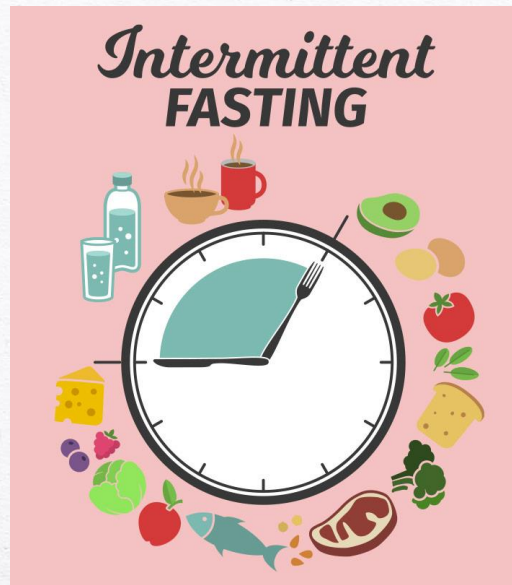
Quick note

Fasting for longer than 48 hours can deplete electrolyte stores. This is dangerous

Types of Intermittent Fasting

- Different types of fasting:
 - 16:8
 - Fast for 16 hours
 - 14:10
 - Fast for 14 hours
 - 5:2 or twice a week method
 - limit calories for 2 days a week

ALTERNATE-DAY FASTING						
DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
Eats normally	24-hour fast OR Eat only a few hundred calories	Eats normally	24-hour fast OR Eat only a few hundred calories	Eats normally	24-hour fast OR Eat only a few hundred calories	Eats normally



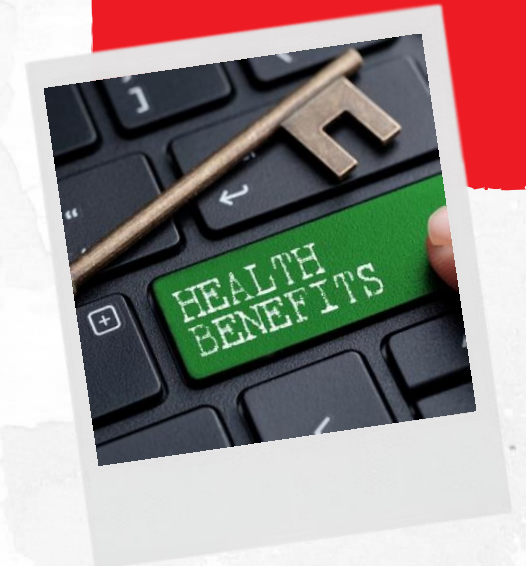
History of Fasting

- Fasting has been around since ancient Greek times
 - Fasting originated in the 5th century. Hippocrates would prescribe it to patients with certain illnesses
 - It was seen as a way to keep demonic forces out
 - A way to treat certain diseases
- Also common in biblical times
 - It was used by prophets to prepare for divine intervention
- Considered a holy practice by several religious groups
 - The month of Ramadan for Muslims
 - For 24 hours during Yom Kippur for Jews
 - Up to 40 days during Lent for Catholics



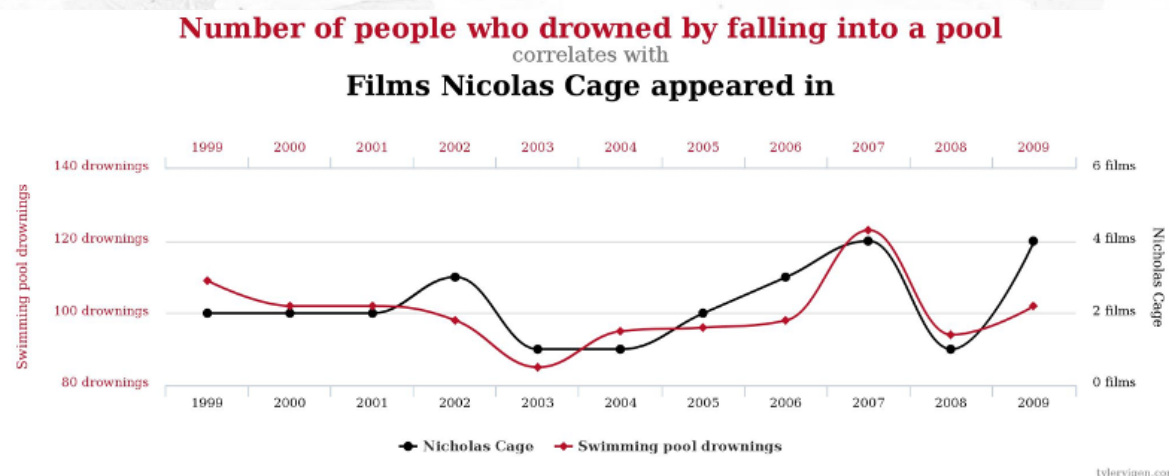
Intermittent Fasting: “Benefits”

- Improved insulin levels – lowering Type 2 Diabetes
- Increased human growth hormone – promotes fat burning and muscle gain
- Cellular repair – promotes removal of waste material from the cells
- Gene expression
- Weight loss – consuming less calories overall
- Boosts metabolic rate



What does the research say?

- When looking for nutrition research, what do we look for?
 - Gold standard is a large randomized control trial (RCT)
 - These are difficult and costly
 - Meta-analyses
 - Replicated studies with large groups
 - Long term studies
 - Human studies
- Also, remember that correlation does not mean causation



Quick note

Observational studies are most common, but do not provide good nutrition data

What does the research say?

- A systematic review article evaluating intermittent fasting in humans:
 - Used only randomized controlled trials and pilot studies
 - Looked at body weight, BMI, and body composition
 - Included 40 studies with sample size between 4 and 334 for 2 to 104 weeks
 - Found that intermittent energy restriction (IER) resulted in weight loss
 - However, when compared to continuous energy restriction (CER), there was no difference
 - Concluded that IER was a good alternative to CER
 - Did not report on weight regain in included studies

Seimon RV, Roekenes JA, Zibellini J, Zhu B, Gibson AA, Hills AP, Wood RE, King NA, Byrne NM, Sainsbury A. Do intermittent diets provide physiological benefits over continuous diets for weight loss? A systematic review of clinical trials. [Mol Cell Endocrinol](#). 2015 Dec 15;418:153-72

Something
to talk about

Most studies have
been performed on
animals – currently
limited human
studies

What does the research say?

- What about studies on religious fasting?
- Ramadan is a month long fast practiced by Muslims during the ninth month of their calendar year
- A meta-analysis of those who participated in Ramadan fasting found
 - In 21 of the 35 chosen studies participants had significant weight loss
 - However, 16 of the studies evaluated weight gain 2 weeks after the end of fasting
 - Found an average regain of 0.72 kg or 1.5 lbs

Patterson, RE, Sears DD. Metabolic Effects of Intermittent Fasting. Annual Review of Nutrition. Vol 37:371-393. 2017.

What does the research say?

- A study performed on 51 obese men examined whether intermittent energy restrictions (IER) versus continuous energy restriction (CER) was effective for weight loss
 - Study was conducted for 16 weeks
 - Found that those who did IER had a higher amount of weight loss
 - One sentence in the discussion is very important “On average, both groups regained weight over the 6-month follow-up...”
 - We are looking for long term weight loss and then weight maintenance
 - Weight regain after 6 months indicates that this might not be an effective method

Byrne NM, Sainsbury A, King NA, Hills AP, Wood RE. Intermittent energy restriction improves weight loss efficiency in obese men: the MATADOR study. International Journal of Obesity 42 129-138(2018).

What does the research say?

- Another review article evaluated the use of fasting and the impact it has on metabolic health
 - Evaluated compliance to the diet, weight loss, insulin resistance, etc
- Concluded that the long term effects of intermittent fasting are unknown and continued “rigorous” studying is needed
 - Most studies found were small, short term, and had a high drop out rate
- Determined intermittent fasting is not an effective way to promote weight loss in obese individuals

Harvie, M, Howell A. Potential Benefits and Harms of Intermittent Energy Restriction and Intermittent Fasting Amongst Obese, Overweight, and Normal Weight Subjects – A Narrative of Human and Animal Evidence. Behav. Sci. 2017, 7(1), 4.

Pros of intermittent fasting

Pros:

- Does not eliminate any major food groups
- It's simple – easy to follow
- No calorie counting
- Promotes weight loss
- Can help improve mental health
- Larger portions in a shorter period of time



Cons

Cons:

- Difficult to sustain
- Can be restrictive
- Interference with social aspect of eating
- Can lead to low energy and unproductiveness – hangry
- Binging is likely
- Digestion issues
- Can slow metabolism down
- Encourages you to ignore your body's signals
- Could reduce physical activity

*** People who have diabetes or blood sugar problems, pregnant or nursing, or under the age of 18, or have a history of an eating disorder should not try intermittent fasting



Tips to start

- Start slowly
 - If you skip breakfast one day, you'll be hungry
 - Start with a 10:14 schedule and work down to a 16:8 and so on
- Commit to at least 3 weeks – results don't occur overnight
- During eating hours, this is not a free-for-all with food
 - You still have to be aware of what and how much you are eating
- Individualize – find what schedule works for you
- Stay hydrated! 20% of our water comes from food. Focusing on hydration while fasting is crucial
- This is not a free-for-all with food, still eat a balanced diet



Intermittent Fasting

What does intermittent fasting look like?

- During times of fasting, only zero calorie beverages are consumed
 - Water, black coffee, unsweetened tea
 - Sodas do not count
- During eating times
 - Focus on eating a balanced diet and eating regularly
 - Fruits
 - Vegetables
 - Whole grains
 - Lean proteins
 - Healthy fats



Example Menu for Intermittent Fasting

Fast from 7 PM until 11 AM

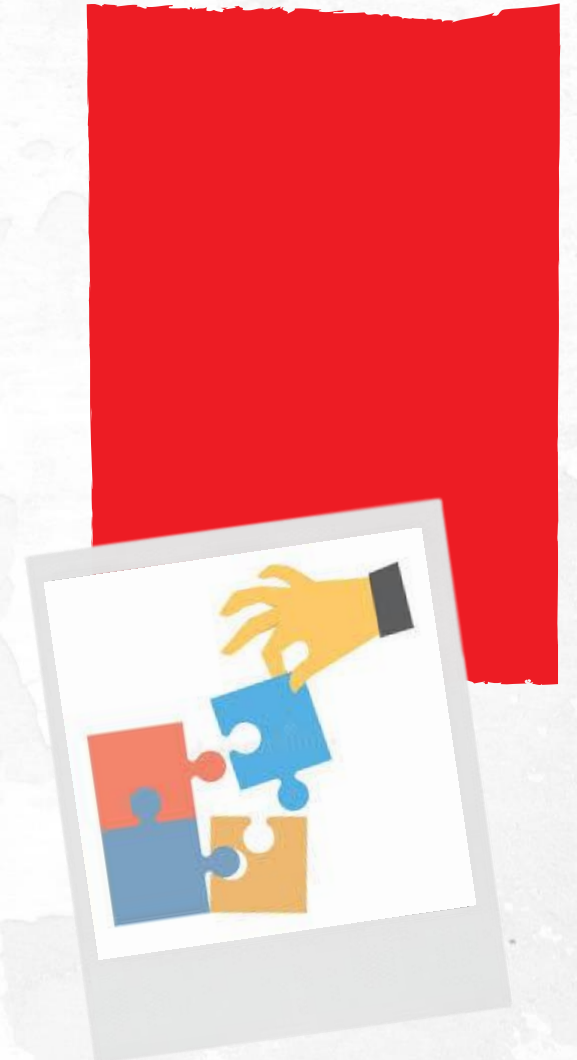
- 11 AM Lunch: grilled salmon, mixed green salad with carrots and tomatoes, croutons and balsamic vinaigrette, whole wheat crackers
- 2 PM Snack: Banana and peanut butter, cheese cubes
- 4:30 PM Snack: Greek Yogurt with granola and berries
- 6:30 PM Dinner: grilled chicken breast, mixed veggies, whole wheat penne noodles, garden salad
- 7 PM – Fasting begins

Quick note

Eating a balanced diet during feeding periods is the key to success

Conclusions

- Intermittent fasting shows some benefits in health, but it does not seem to be better than other options
 - Weight loss, diabetes, cardiovascular, mental, etc
 - Is this due to cutting calories?
- Data on the benefits is limited, further research is needed
- If intermittent fasting works for you and does not leave you feeling deprived or hungry all the time, and if you are eating a balanced diet during times of eating, it can be a good diet pattern.



Questions?

Thank you!