HACK3D FAT LOSS at Biohack Strength

> *"Obesity has become one of the most important public health problems worldwide, which suggests the need for evidence-based dietary strategies for weight loss and its maintenance. Weight management depends upon complex factors such as amount of food eaten, type of food eaten, and timing of meals. In this review, we identified evidence-based dietary strategies for weight management based on these three components. An energy deficit is the most important factor in weight loss. A low-calorie diet with a low fat or carbohydrate content has been recommended; however, in some cases, a very-low-calorie diet is required for a short period. Some macronutrient composition-based diets, such as the ketogenic diet or high-protein diet, could be considered in some cases, although the potential risks and long-term effectiveness remain unknown. Meal timing is also an important factor in weight management, and higher-calorie breakfasts in combination with overnight fasting may help to prevent obesity[1]."*

It is known that the success rate of dieting, in general, is only 20%[2]. It may be even lower considering that obesity is one of the largest major public health concerns in the modern era. Obesity is now considered a global epidemic due to the gradual but continuous increase in its prevalence[1]. This is exactly why HACK3D FAT LOSS protocols do not require following any particular diet. Instead, the protocols were designed on the basis of sustainability by allowing them to be customized per each individual.The research agrees that no single approach to dieting for weight management exists yet and that programs should be tailored to each individual:

> *Our review indicated that there is no single best strategy for weight management. Hence, strategies for weight loss and its maintenance should be individualized, and healthcare providers must choose the best strategy based on patient preference[141]."*

HACK3D FAT LOSS was designed to navigate the conflicting world of weight loss. A key reason why people struggle with losing body fat is because there is an overwhelming amount of conflicting information available in combination with self-promotion. As the dietary recommendations continue to change, so does the prevalence of obesity in the United States:

> *"Against the backdrop of the obesity epidemic and the inability of most individuals to sustain weight loss induced by calorie-restricted diets[3], alternative dietary approaches to achieve short- and long-term weight loss have become of increasing scientific*

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[1] J Obes Metab Syndr. 2021 Mar 30; 30(1): 20–31. Published online 2020 Oct 27. doi: 10.7570/jomes20065

[2] Wing RR, Phelan S. Long-term weight loss maintenance. Am J Clin Nutr. (2005) 82:S222–5. 10.1093/ajcn/82.1.222s

[3] Mann T., Tomiyama A.J., Westling E., Lew A.M., Samuels B., Chatman J. Medicare's search for effective obesity treatments: Diets are not the answer. Am. Psychol. 2007;62:220. doi: 10.1037/0003-066X.62.3.220.

interest[4]. Up until recently (2015), the Dietary Guidelines for Americans recommended that macronutrient intake consist of 45–65% of daily energy intake from carbohydrates, 20–35% from fats, and 10–35% from protein[5]. In line with these recommendations, the results of the U.S. National Health and Nutrition Examination Survey (NHANES) showed that carbohydrate consumption increased from 39% of total energy intake in 1971 to 51% in 2011. During this same time period, however, the percentage of overweight Americans also increased dramatically (from 42% to 66%)[6]. Based in part on such trends in weight gain, the creators of many popular diets (e.g., Atkins, Zone) have suggested that diets in which carbohydrate intake is significantly higher than other macronutrients are not an optimal approach for weight loss and may even contribute to weight gain. Most of these diets are published and promoted by one or more health and wellness "experts" who attest to the health and weight loss benefits observed when following their recommended diet.[7]"

"Recently, intermittent fasting and time-restricted eating have become popular and seem to be effective for weight loss[8]. However, several questions remain unanswered. Does a high-protein diet aid in weight loss and maintenance? Can a ketogenic diet burn fat? Do carbohydrates increase abdominal fat? Can intermittent fasting help one lose weight? New dietary information has only added to the current confusion due to several controversial dietary regimens, and there is no clear guidance on the optimal diet for weight loss[140]."

Although some of the diets mentioned in the above research may have yielded some positive results, the answer for sustainable, long-term fat loss still does not exist in any one of these particular diets:

"In the conclusion of the study it was mentioned that fad diets facilitate fast and easy weight loss, improve appearance, and do not require a longer time to achieve the results. These diets are effective in improving health to some extent. However, compliance is always a significant concern because of the unrealistic combinations and nutritional inadequacy due to the complete elimination of one or more essential food groups."

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[4] Johnston B.C., Kanters S., Bandayrel K., Wu P., Naji F., Siemieniuk R.A., Ball G.D., Busse J.W., Thorlund K., Guyatt G., et al. Comparison of weight loss among named diet programs in overweight and obese adults: A meta-analysis. JAMA. 2014;312:923–933. doi: 10.1001/jama.2014.10397.

[5] U.S. Department of Agriculture. U.S. Department of Health and Human Services . Dietary Guidelines for Americans. 7th ed. Government Printing Office; Washington, DC, USA: 2010.

[6] Cohen E., Cragg M., deFonseka J., Hite A., Rosenberg M., Zhou B. Statistical review of US macronutrient consumption data, 1965–2011: Americans have been following dietary guidelines, coincident with the rise in obesity. Nutrition. 2015;31:727–732. doi: 10.1016/j.nut.2015.02.007.

[7] Anton, Stephen D., Azumi Hida, Kacey Heekin, Kristen Sowalsky, Christy Karabetian, Heather Mutchie, Christiaan Leeuwenburgh, Todd M. Manini, and Tracey E. Barnett. 2017. "Effects of Popular Diets without Specific Calorie Targets on Weight Loss Outcomes: Systematic Review of Findings from Clinical Trials" Nutrients 9, no. 8: 822. https://doi.org/10.3390/nu9080822

[8] Cho Y, Hong N, Kim KW, Cho SJ, Lee M, Lee YH, et al. The effectiveness of intermittent fasting to reduce body mass index and glucose metabolism: a systematic review and meta-analysis. J Clin Med. 2019;8:1645. doi: 10.3390/jcm8101645.

In other words, diets simply don't work because they can't be sustained for long periods of time while also maintaining optimal health and, of course, your sanity. If a client can't maintain progress and achieve long-term success, what is the purpose in putting them through such mystery?

> *"Despite the rapid weight reduction, there are some concerns for those with comorbidities. All these diets have not been extensively studied while those studies that have been mentioned in the literature have high dropout rates and are sometimes non-conclusive. More randomized controlled trials of prolonged duration need to be done to establish the safety … for the public and to make people aware of the possible consequences of long-term adherence to such dietary patterns.[140]"*

The goal with HACK3D FAT LOSS is to avoid "yo-yo dieting", where clients continually start a diet only to fall off shortly after in a vicious cycle. There are several controversial reports on the harmful effects of such dieting cycles, some of which concluded that weight cycling is linked to a net increase in weight gain and body fat and heightened cardiovascular and metabolic risk:

> *"The most effective and prescribed intervention to prevent or control obesity is modification of daily habits, such as a decrease in calorie intake and increase in physical activity. The difficulty of people to adhere to this recommendation leads often to lifelong periodic energy restriction cycles associated with repeated loss and regain of body weight and changes in body mass index (BMI). These periodic up-and-down weight cycles are referred to as yo-yo diets[9]."*

HACK3D FAT LOSS has accomplished what no other diet has done: It's accounted for evolutionarily consistent ways of eating while also reducing inflammation: the way humans have survived for thousands of years. In eating in an evolutionarily consistent way, HACK3D FAT LOSS does not require dieting, calorie counting, or exercise to achieve massive results. By following specific protocols designed to return us to our natural state and reduce inflammation, we can biologically hack our physiology and manipulate the fat storage process. This is biohacking at its finest.

> *"Despite their popularity among the general public, the efficacy of many popular diets for weight loss has been called into question by researchers, nutrition experts, and health care professionals ([10],[11],[12])."*

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[9] Obesity (Silver Spring). 2018 Nov; 26(11): 1673. doi: 10.1002/oby.22335

[10] Makris A., Foster G.D. Dietary approaches to the treatment of obesity. Psychiatr. Clin. N. Am. 2011;34:813. doi: 10.1016/j.psc.2011.08.004.

[11] Riley R.E. Popular weight loss diets. Clin. Sports Med. 1999;18:691–701. doi: 10.1016/S0278-5919(05)70176-9.

[12] Volpe S.L. Popular weight reduction diets. J. Cardiovasc. Nurses. 2006;21:34–39. doi: 10.1097/00005082-200601000-00008.

The HACK3D FAT LOSS program consists of carefully selected protocols that are exactly in line with the way our bodies where evolutionarily designed and adapted based on factors including:

- Intentionally and exclusively eating a diet rich in whole foods
- Eating a diet low in inflammatory foods and cooking methods
- Eating within a defined eating window
- Eating seasonally
- Eating not based on hunger
- Eating with an emphasis on macronutrient timing
- Eating to intentionally induce metabolic flexibility to intentionally manipulate fat storage hormones and temporarily disable physiological fat storage mechanisms
    - Periodically resetting this process to avoid negative health outcomes
- Reducing the modern-day emphasis on exercise for fat loss. If our ancestors did not exercise for fat loss, why should we?
    - Exercise is recommended strictly on the premise of well-known and well-researched positive health outcomes

An example of HACK3D FAT LOSS bringing us back to our evolutionary way is intermittent fasting and time-restricted eating.

> *"...there is also an emergent body of literature suggesting the beneficial effects of periodic fasting cycles in humans ([13],[14], [15]). This extensive daily fasting period leads to a metabolic switch from carbohydrate to fat utilization[16], promoting the activation of degradation and turnover pathways that promote repair and removal of damaged macromolecules[123]."*

Both have become mainstream dieting trends with proven benefits; however, neither is new for humans. Frequently, our ancestors would go extended periods without food in times of food scarcity. Our bodies have adapted to account for this! It's called body fat storage. I believe that having the ability to store energy for later use is most likely the only reason humans survived as a species. What has happened in modern times is we are using this survival mechanism incorrectly because we don't know how to eat, when to eat, or what to eat. Instead, we eat what we want, when we want, and how we want. We live in an era where for the first time in human history, starvation is no longer a threat. We are in an era of food overabundance and we are more sedentary now than ever. My clients wonder why they can't lose stubborn body fat and the most obvious reason is that their current lifestyle not only fully supports a state of fat storage, it enhances it. HACK3D FAT LOSS was created to undo the damage and put out the fire so to

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[13] Mattson MP, Allison DB, Fontana L, et al. Meal frequency and timing in health and disease. Proc Natl Acad Sci 2014;111(47):16647–16653.
[14] Longo VD, Panda S. Fasting, Circadian Rhythms, and Time-Restricted Feeding in Healthy Lifespan. Cell Metab. 2016;23(6):1048–1059.
[15] Sutton EF, Beyl R, Early KS, Cefalu WT, Ravussin E, Peterson CM. Early Time-Restricted Feeding Improves Insulin Sensitivity, Blood Pressure, and Oxidative Stress Even without Weight Loss in Men with Prediabetes. Cell Metab. 2018. June 5;27(6):1212–1221.
[16] Anton SD, Moehl K, Donahoo WT, et al. Flipping the Metabolic Switch: Understanding and Applying the Health Benefits of Fasting. Obesity 2018;26(2):254–268.

speak, all without sacrificing the foods you love. Biohacking your fat loss is an art. With HACK3D FAT LOSS you can make it a reality.

Furthermore, HACK3D FAT LOSS does not require starvation, caloric restriction or the complete elimination of any one food group.

> *"... humans and animals have natural mechanisms to counter weight loss as starvation can have negative health consequences like reduced fertility and even death. Calorie restriction alters the neuropeptides' expression in the hypothalamus; which reduces metabolic rate and stimulates appetite, resulting in a weight loss plateau[17]."*

Instead, the client has the power to decide how they would like to apply the HACK3D FAT LOSS protocols so that those protocols conform to the client's lifestyle and do not work against it. This is the key to sustainable long-term fat loss. This means the client is in complete control of their weight loss journey. The client will also be in a well-fed state most of the time and does not need to practice caloric restriction, which places unnecessary stress on the body, increases cortisol levels, and increases hunger:

> *"Another study reported an increase in stress hormone levels in females due to the restricted intake of 1,200 kcal/day. There is considerable evidence that stress stimulates appetite, thus promoting weight gain via elevations of cortisol.[140]"*

HACK3D FAT LOSS strategically used the body's own natural detoxification process rather than encouraging an unsustainable, unpleasant detoxification diet. This is accomplished by protocols designed to temporarily remove suspect and likely inflammatory foods and beverages, allowing the body to recover from a state of constant inflammation.

> *"Many of the Detox Diets (DD) are liquid-based, low-calorie, and nutrient-poor. For example, a part of BluePrint Cleanse, Excavation Cleanse, provides only 19 g protein and 860 kcal/day which is far below the actual requirement. Food and Agriculture Organization (FAO) recommends a minimum of 0.83 g/kg body weight of high-quality protein and 1,680 kcal/day for an adult ([18],[19]). Based on the previous work, DD may induce stress, raise cortisol levels and increase appetite, resulting in difficulty in losing*

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[17] Sainsbury A, Zhang L. Role of the arcuate nucleus of the hypothalamus in regulation of body weight during energy deficit. Mol Cell Endocrinol. (2010) 316:109–19. 10.1016/j.mce.2009.09.025

[18] Joint WHO/FAO/UNU Expert Consultation. Protein and Amino Acid Requirements in Human Nutrition. Geneva: World Health Organization; (2007).

[19] Food and Agriculture Organization [FAO]. FAO Methodology for the Measurement of Food Deprivation: Updating the Minimum Dietary Energy Requirements. (2008). Available online at: https://www.fao.org/fileadmin/templates/ess/documents/food_security_statistics/metadata/undernourishment_methodology.pdf (Accessed June 20, 2021).

weight, followed by binge eating and weight gain ([20], [21], [22]) … Energy-restricted DDs are capable of short-term weight loss. But still, there is a high likelihood of health risks from detox products because of their nutritional inadequacy. As no convincing evidence exists in this domain so such diets and products need to be discouraged by health professionals and must be subjected to regulatory review and monitoring.[140]"

This section is currently being updated.

[20] Pankevich DE, Teegarden SL, Hedin AD, Jensen CL, Bale TL. Caloric restriction experience reprograms stress and orexigenic pathways and promotes binge eating. J Neurosci. (2010) 30:16399–407. 10.1523/JNEUROSCI.1955-10.2010

[21] Mazurak N, Gunther A, Grau FS, Muth ER, Pustovoyt M, Bischoff SC, et al. Effects of a 48-h fast on heart rate variability and cortisol levels in healthy female subjects. Eur J Clin Nutr. (2013) 67:401–6. 10.1038/ejcn.2013.32

[22] Tomiyama AJ, Mann T, Vinas D, Hunger JM, DeJager J, Taylor SE. Low calorie dieting increases cortisol. Psychosom Med. (2010) 72:357–64. 10.1097/PSY.0b013e3181d9523c.Low