



# RECOMMENDED DIETS IN OBESITY

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# DIETARY INTERVENTION

- Weight gain is always a result of excess energy intake compared with energy expenditure.
- To lose weight at 1 to 2 lb/week, a healthy rate of weight loss as recommended by NHLBI guidelines, a calorie deficit of 500 to 1000 calories/day is required.
- 3500 calories = 1 lb of fat ( $\approx 0.5$  kg)
- Any restrictive diet can cause diuresis in the initial 1 to 2 weeks, resulting in 2% to 4% weight loss largely because of water loss .



# COMMON TYPES OF DIETS FOR LOSING WEIGHT

- Moderate Energy-Deficit Diets
- Low-Calorie Diets
- Very-Low-Calorie Diets
- Low-Carbohydrate, High-Protein Diets
- Low-Fat, Low-Energy-Density Diets
- Low-Glycemic-Index Diets
- Balanced Deficit/Portion-Controlled Diets
- Meal Replacement Diets



# OTHER POPULAR DIETS FOR WEIGHT LOSS

- Atkins Diet
- HCG Diet
- Caveman (Paleo) Diet
- Detox Diets
- Flat Belly diet
- Dr. Oz Ultimate Diet
- Raw Foodism
- The 5:2 Diet
- The 8-h Diet
- The 17-diet
- The 3-Phasic Diet



# MODERATE ENERGY-DEFICIT DIETS

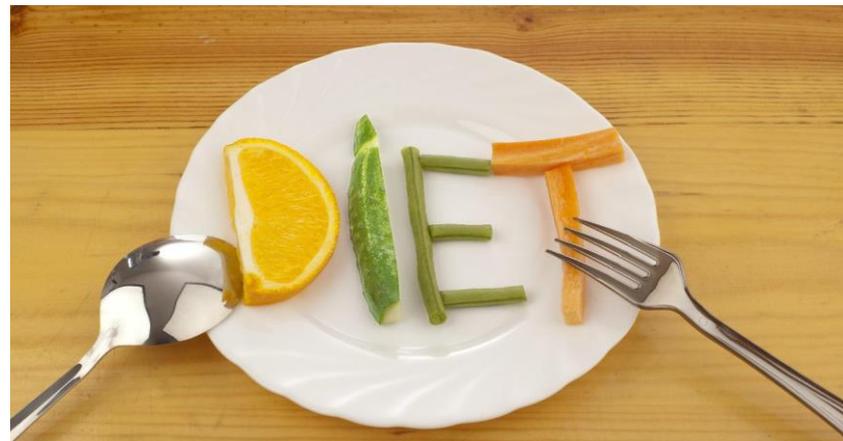
- 1500 to 1800 kcal/day,
- A caloric deficit of 500 calories/day results in 1 lb of weight loss/week
- Easy adherence, because small changes are required in eating habits
- Reducing total calories while keeping proportions from carbohydrate, fat, and protein roughly the same as before.



Modern Nutrition, 11<sup>th</sup> edition.

# LOW-CALORIE DIETS

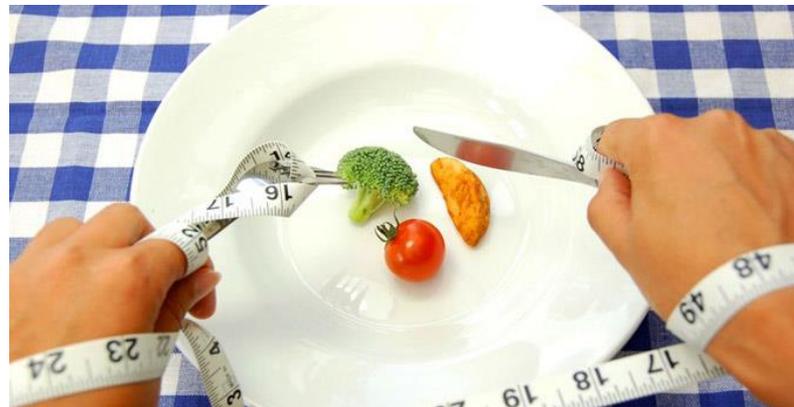
- 800 to 1500 kcal/day
- First line approach for patients with BMIs between 30 and 34.9, especially those with co-morbidities such as type 2 diabetes or high blood pressure.
- A typical loss of more than 8% of initial body weight over 3 to 6 months of treatment.
- Diets vary in protein, carbohydrate, and fat content



# VERY-LOW-CALORIE DIETS

- Fewer than 800 kcal/day
- Suitable for Individuals with severe or morbid obesity (BMI=40 and over).
- It will take at least 1 year of steady dieting to lose 50 lb.
- It contain meal replacements, often in the form of soy, egg, or milk, low-carbohydrate, low-fat shakes or bars, containing vitamins and minerals.

Modern Nutrition, 11<sup>th</sup> edition



# MEAL REPLACEMENT DIETS

- It include **one or more meals** replaced by commercial **dietary formulations**, which are nutritionally **balanced and macronutrient** and calorie **controlled** (800 to 1600 kcal/day).
- Diets may be a good **choice** when **LCDs** have not worked for **rapid** initial weight loss.
- One **meta-analysis** of **six** trials reported that this diet induced **significantly** greater weight loss (**6 lb**) compared with **LCDs** at 3 months.
- **Weight maintenance** on a **long-term basis**, may not be achievable.



Heymsfield, S.B., et al., *Int J Obes Relat Metab Disord*, 2003.

# LOW-FAT, LOW-ENERGY-DENSITY DIETS

- 25% reduction in energy intake and 15% of energy from fat
- low-fat, low-energy diets concentrate on reducing overall calories in the diets.
- Reducing the energy density of the diet by replacing fat with more vegetables and whole grains can be an effective strategy to lose weight because fat, at 9 kcal/g, provides more than double the calories provided by carbohydrates or proteins(4 kcal/g).
- Evidence reported significant weight loss in obese individuals compared with low-fat high- carbohydrate diets.

# LOW-GLYCEMIC-INDEX DIETS

- The *glycemic index of foods* refers to the **metabolic effects** on **blood glucose** and **insulin** levels.
- Ingestion of **high-glycemic-index** foods (**potatoes** and **white bread**) produce rapid **increases** in blood **glucose** and **insulin** levels:

This result in **short satiety**, low levels of **fat oxidation**,  
and subsequent **weight gain** secondary to **poor**  
**appetite** regulation caused by the rapid **rise**  
and **fall**  
in blood glucose and insulin.



# LOW-GLYCEMIC-INDEX DIETS

- This diet contain more **fruits** and **vegetables**, which are high in **fiber** (with **Low GL, GI**) such as **cherries** and are lower in foods high in **simple carbohydrates** such as **sugar**, **refined** foods, and **starchy** vegetables.
- Evidence showed that lowering the glycemic load significantly **reduced body weight**, **increased fat oxidation** and **decreased fat regain** after weight loss.

Shikany, J.M., et al., *Medscape General Medicine*, 2006.

# BALANCED DEFICIT/PORZION-CONTROLLED DIETS

- Reducing serving sizes from each food group can allow for a calorie restriction of 300 to 500 kcal/ day, resulting in weight loss of up to 1 lb/week.
- Adherence to this diet may be better because the diet involves only portion changes, rather than avoidance of specific foods that may be favorites.
- The goal is to achieve caloric deficit working in the context of unchanged initial dietary choices.



Modern Nutrition, 11<sup>th</sup> edition

# LOW-CARBOHYDRATE, HIGH-PROTEIN DIETS

- ✓ It recommends up to **20 g of carbohydrate** at the onset of the diet with a **high intake of protein and fat**.
- ✓ This diet typically involves **three phases** :
  1. The **induction phase**, which is the **weight loss** initiation phase and includes no more than **5%** of energy from **carbohydrate**, **35%** from **protein**, and **60%** from **fat**



# LOW-CARBOHYDRATE, HIGH-PROTEIN DIETS

2. The **ongoing phase**, is a continuation of weight loss, with the proportions of **carbohydrate (9%)**, **protein (33%)**, and **fat (58%)**.
3. The **maintenance phase**, in which carbohydrate intake increases to **no more than 20%** of total energy with **25% to 27% protein** and **approximately 52% fat** .

# LOW-CARBOHYDRATE, HIGH-PROTEIN DIETS

- Side effects include:
  - ✓ High fat intake, particularly saturated fat in the diet, is associated with health problems such as certain types of cancers and cardiovascular disease.
  - ✓ Cognitive impairment, constipation, diarrhea, dizziness, headaches, insomnia, kidney stones, and nausea
  - ✓ Regarding CVD, a meta-analysis do not allow for a recommendation of either low-fat or high-fat diets in the primary prevention of cardiovascular disease.

# HIGH PROTEIN LOW CALORIE DIET

- Deficit daily calorie intake
- Usually contain **20-25% of protein**, **45-55% of carbohydrate**, and **25-30% of fat**.
- Mostly lead to **weight loss**, **muscle gain** and **waist circumference** reduction.
- Some evidence reported benefits for **glucose level** and **lipid profile**.
- Increased **Satiety** with **No changes** in **leptin** or **ghrelin**.
- Usually contain **half of protein from vegetables** sources and half from **low fat dairy** products, more **sea food**, **poultry** and less red meat.

Amini, P., et al., *International Journal of Preventive Medicine*, 2016.

# OTHER POPULAR DIETS FOR WEIGHT LOSS

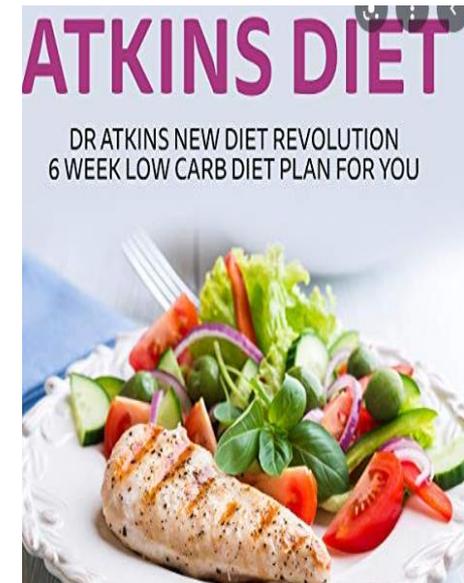
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# ATKINS DIET

- **Calorie:** up to 75% fat, 5-10% carbohydrate and the rest from protein.
- **The claim:** You'll lose up to 15 pounds within two weeks.
- **The theory:** The body is an engine; carbs are the gas that makes it go. Limiting carbs makes the body turn to an alternative fuel – stored fat. Fat is burned



# ATKINS DIET (PHASES)

- **Phase 1 (induction):** Under **20 grams of carbs** per day for **2 weeks**. Eat **high-fat, high-protein**, with **low-carb vegetables** like leafy greens. This **kick-starts** the weight loss.
- **Phase 2 (balancing):** **Slowly** add **more nuts**, low-carb vegetables and **small amounts of fruit** back to your diet.
- **Phase 3 (fine-tuning):** When you are **very close** to your goal weight, **add more carbs to** your diet until weight loss **slows down**.
- **Phase 4 (maintenance):** Here you can eat **as many healthy carbs as your body can tolerate** without regaining weight.

# ATKINS DIET

## FOODS TO AVOID :

- **Sugar:** Soft drinks, fruit juices, cakes, candy, ice cream, etc.
- **Grains:** Wheat, rye, barley, rice.
- **Vegetable oils:** Soybean oil, corn oil, cottonseed oil, canola oil and a few others.
- **Trans fats:** Usually found in processed foods with the word "hydrogenated" on the ingredients list.

### **In Induction phase, avoid having:**

- **High-carb vegetables:** Carrots, turnips, etc
- **High-carb fruits:** Bananas, apples, oranges, pears, grapes
- **Starches:** Potatoes, sweet potatoes
- **Legumes:** Lentils, beans, chickpeas, etc

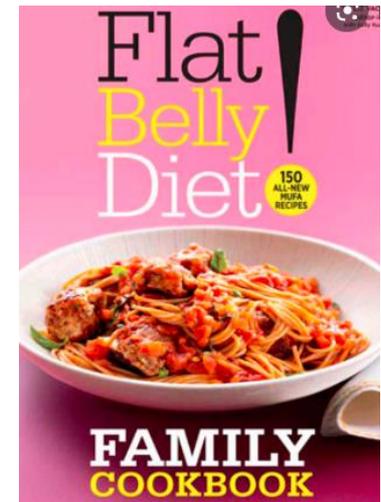
# ATKINS DIET

## FOODS TO EAT:

- **Meats:** Beef, pork, lamb, chicken, bacon and others.
- **Fatty fish and seafood:** Salmon, sardines, etc.
- **Eggs:** The healthiest and **Omega-3**
- **Low-carb vegetables:** Kale, spinach, broccoli, asparagus and others.
- **Full-fat dairy:** Butter, cheese, cream, full-fat yoghurt.
- **Nuts and seeds:** Almonds, walnuts, sunflower seeds, etc.
- **Healthy fats:** **Extra virgin olive oil**, **coconut** oil, avocados and avocado oil.

# FLAT BELLY DIET

- One **MUFA** serving with **every meal** and daily intake of **1,600** calories are recommended. (Eat **400** calories per meal, **four** times per day )
- Don't go longer than **4 hours without eating**.
- **The claim:** You'll drop up to **15 pounds in 32 days** and lose several **inches of belly fat**.
- **The theory:** **Monounsaturated** fatty acids, target and destroy **belly fat** while promoting **fullness** and preventing overeating, according to the diet's creators Liz Vaccariello and Cynthia Sass. These plant-based fats are found in foods like **nuts, seeds, chocolate, avocados** and **olive oil**.



# FLAT BELLY DIET

- There are two parts:

1. A four-day "anti-bloat" jumpstart: consuming 1,200 calories each day. avoid adding salt to any food and avoid Processed foods, Foods that can make you gassy, like beans, broccoli, and pasta, bananas, and bagels; drink 2 liters of water mixed with ginger root, cucumber, lemon, and mint leaves, which calls "sassy water."
2. and a four-week eating plan : daily total: 1,600



# THE PALEO (CAVEMAN) DIET

Don't eat		Eat	
 <b>Cereal grains</b>	 <b>Legumes</b> (including peanuts)	 <b>Grass produced</b>	 <b>Fish/seafood</b>
 <b>Dairy</b>	 <b>Refined sugar</b>	 <b>Fresh fruits and veggies</b>	 <b>Eggs</b>
 <b>Potatoes</b>	 <b>Processed foods</b>	 <b>Nuts and seeds</b>	 <b>Healthful oils</b> (Olive, walnut, flaxseed, macadamia, avocado, coconut)
 <b>Refined vegetable oils</b>	 <b>Salt</b>		

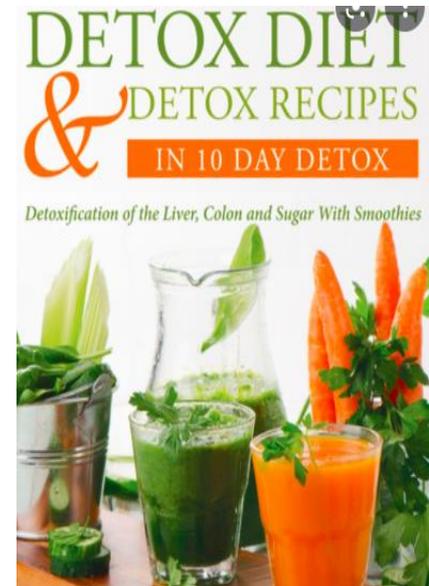
# THE PALEO (CAVEMAN) DIET

- There's no calorie counting, and the fiber-rich fruits and vegetables will fill you up, as will the lean meat.
- Exercise is **Not** required (but good to maintain weight loss and for **overall health**).
- To fill in the nutrient gaps, supplement the plan with folate, **B** vitamins, calcium, and vitamin D.



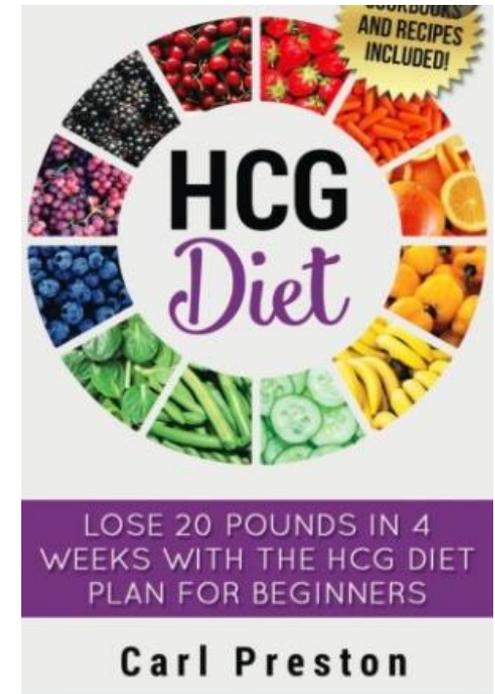
# DETOX DIET

- It has three principles: **rest**, **reduce**, and **rebuild**:
  - ✓ **The rest** comes from not chewing food.
  - ✓ **The reducing** is the weight loss from being on a liquid diet.
  - ✓ **Rebuilding** is what author Roni DeLuz says will happen to your cells **after 21 days** on this plan.
- On the plan, you drink **liquid every 2 hours**, take supplements that have a laxative effect.
- **Not allowed**: Anything that has to be **chewed**, **processed food**, **meat**, cow's **milk**, **alcohol**, **salt**, or **coffee**
- Lose a **pound a day** and rid your body of **toxins**
- Evidence report that there's no reason to detoxify your body by this diet; It may even be **harmful**.



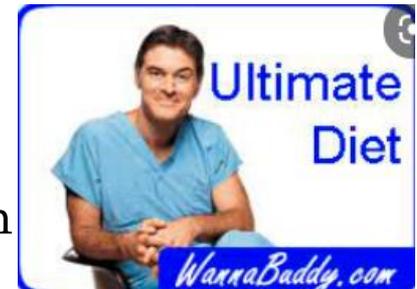
# HCG DIET

- If you also go on an ultra-low-calorie diet, human chorionic gonadotropin hormone (hCG) can “reset your metabolism” so you lose as much as a pound a day without feeling hungry or weak.
- The hCG diet limits you to 500 calories a day for 8 weeks while taking hCG, either by getting a shot or by taking a “homeopathic” product, such as oral drops or sprays.
- The diet lets you have two meals a day, lunch and dinner. Each meal has to include one protein, one vegetable, one bread, and one fruit.



# DR. OZ ULTIMATE DIET

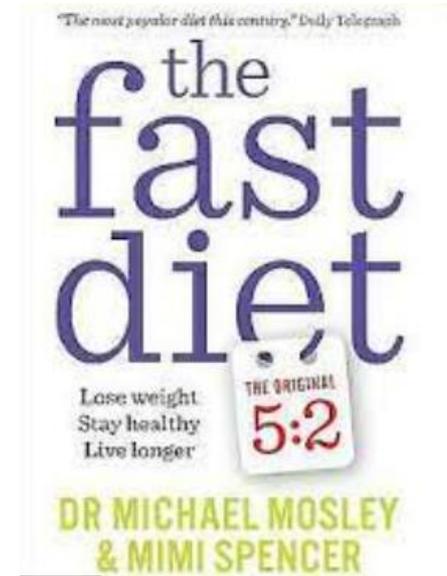
- Take up to 2 inches off your waist within 2 weeks.
- The plan is based on you **knowing** things like how your body **stores fat** and burns calories, why you get hungry, and what makes you **full**. It also gives tips like using **smaller plates** to keep your portions smaller.
- **Eat** : fresh fruits and vegetables, lean proteins such as skinless chicken breasts and salmon, low fat dairy, and whole grains.
- **Do not eat**: Rule of 5". If **foods** have any of these listed: **sugars**, **syrups**, **white flours**, saturated fats, and trans fats.
- **Half an hour a day** of cardiovascular activity is necessary.



# THE 5:2 DIET

## (BY MICHAEL MOSLEY)

- Also known as **The Fast Diet**
- The most popular intermittent fasting diet
  - 5 days of the week are **normal** eating days
  - 2 days restrict calories to 500–600 per day
- This is about **500 calories per day** for **women**, and **600 for men**
- There are no requirements about *which* foods to eat
- At least one non-fasting day **between** other days
- Though it may be linked to several **health benefits**, fasting diets may **not be suitable for everyone**.



# THE 5:2 DIET (HEALTH BENEFITS)

Seems to be **easier** to follow

May help reduce :

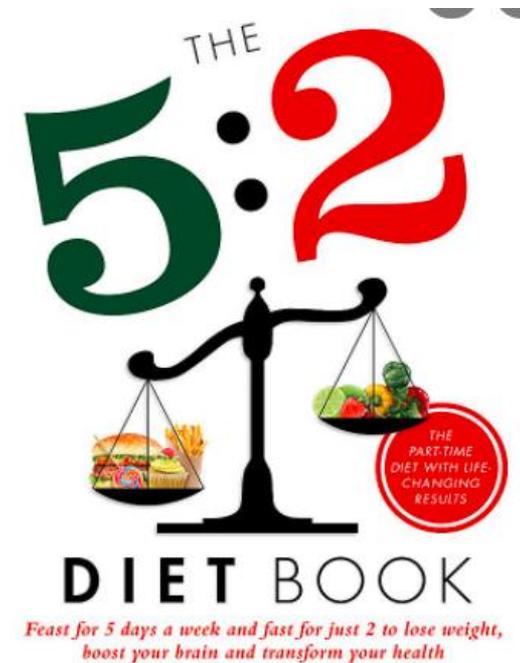
insulin resistance

asthma,

seasonal allergies,

heart arrhythmias,

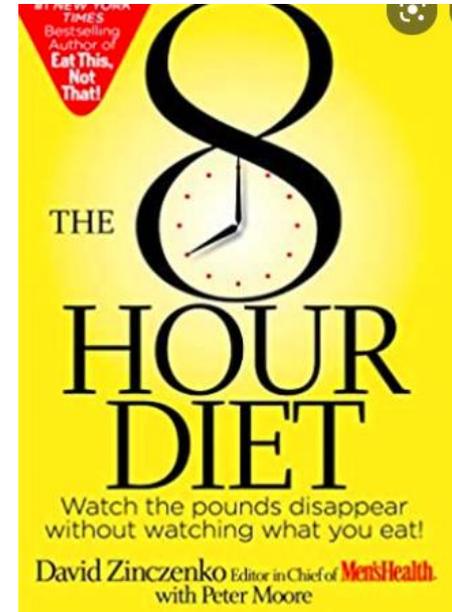
menopausal hot flashes and more



# THE 8-HOUR DIET

(BY DAVID ZINCZENKO)

- Another form of **intermittent fasting**
- Eat **normal** meals for **eight hours**,
- Fasting for the **remaining 16 hours** of the day
- The drinks outside of the 8 hour period are:  
**water, unsweetened coffee or tea**
- **Hydration** is super important on the 8 hour diet
- **Time Frame:**
  - 9 a.m. to 5 p.m.
  - 10 a.m. to 6 p.m.
  - noon to 8 p.m.
- Some experts advise finishing food consumption in the early evening, as metabolism slows down after this time. However, this is not feasible for everyone.



# THE 17-DAY DIET

(BY MICHAEL RAFAEL MORENO)

**Three cycles, each lasting 17 days, plus a fourth long-term maintenance cycle :**

**Cycle 1: "Accelerate,"** approximately 1,200 calories/day

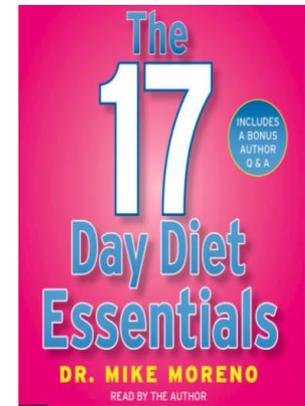
This phase cleanses, hydrates, removes unhealthy carbs, improves eating habits, stimulates fat metabolism

**Cycle 2: "Activate,"** alternating a slightly higher-calorie plan.

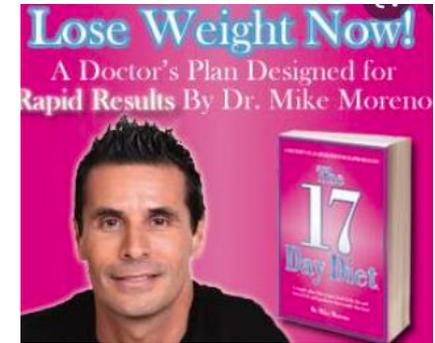
zig-zag between cycles keeps the metabolism guessing, and continues to stimulate fat burning

**Cycle 3: "Achieve,"** stabilization period that allows healthier foods with a slower rate of weight loss of about 2-3 pounds

**Cycle 4: "Arrive“,** follow meal plans from one of the earlier cycles during the week



# THE 17-DIET (BY MICHAEL RAFAEL MORENO)



**The diet starts a**

high-protein,

low-fat,

no-carb (minimizing starchy vegetables and fruits).

But more and more foods are added in later phases.

**Exercise is a key component:**

17 minutes each day doing light exercise like walking  
(in the first and second cycles),

40 to 60 minutes of aerobic exercise "most" days of the  
week in the third cycle.

Adding exercise for an hour on weekends

# RAW FOODISM

- Also known as **rawism**
- Following a raw food diet, is the dietary practice of eating **only or mostly food** that is **uncooked and unprocessed**.
- Depending on the **philosophy**, or type of **lifestyle**: raw food diets may include a selection of **fruits, vegetables, nuts, seeds, eggs, fish, meat, and dairy products**.
- The diet may also include **simply processed** foods: various types of sprouted seeds, **cheese**, fermented foods such as **yogurts, kefir**, but **not** foods that have been **pasteurized, homogenized**, or with **fertilizers, solvents, and food additives**.



# RAW VEGANISM

- This diet eliminates **all foods of animal origin**, and all foods cooked at temperatures **above 48 degrees Celsius** (118 degrees Fahrenheit).

# RESISTANT TO WEIGHT LOSS

## Causes:

- Usually, a **long** period of weight loss Diet
- Changes in **hormonal** levels, specially cortisol
- Wrong Diets
- Improper **Carbohydrate distribution** in Diet
- Low **Protein** intakes



## 3 PHASIC DIET (7 DAYS)

- Phase 1 : **Reduce** the changes in **hormones** in **2 days**: **High carbs** (fruits) with **lower GI, HBV** proteins in medium and **very low fats**
- Phase 2: **Reduce** the Accumulated **fat** in body in **2 days** : **Avoid** using **refined carbs**, use higher **vegetables**
- Phase 3: **Increase metabolism** or **TEF** In **3 days** :**HBV** and **LBV** proteins, favorable **fats**



# CONCLUSION

- **Standard** diets at a more **modest** level of energy restriction may be **preferable**.
- Interventions that include increased levels of **social support** and **self-regulatory** methods such as **goal setting** and **self-monitoring**, along with increased **contact with providers**, have been shown to be more effective.



THANK

YOU

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