Baptist Health
HEART INSTITUTE

A Review of the
Data for Diets

Alex Orsini, MD, FACC

Disclosures: None

Obesity Definition

- Normal weight: BMI 18.5 to 24.9 kg/m2
- Overweight: BMI 25-29.9
- Class I Obesity: BMI 30-34.9
- Class II Obesity: BMI 35-39.9
- Class III Obesity: BMI $\geq$ 40

Obesity Prevalence

- In 2016, 39.6% of US adults were obese

- Class III Obesity in 7.7% of US adults

Cardiovascular Effects of Obesity

- 1. Insulin resistance and hyperinsulinemia, activation of RAAS, stimulation of sympathetic nervous system, etc
- 2. Increased CRP and TNF
- 3. Obesity-Hypoventilation
- 4. Increased blood volume, stroke volume, cardiac output, LV wall mass/stress
- 5. Pulmonary HTN, LV and RV failure

Cardiovascular Effects of Obesity, part 2

- OSA: >40% prevalence of OSA in overweight patients, and 50-98% in class III Obesity
- Almost all CVD-Right and left sided CHF, pulmonary HTN, Coronary disease, CVA, AFib
- Almost all CVD risk factors-insulin, DM, HTN, dyslipidemia, inflammatory markers (CRP)

- So we emphasize the medical benefits of wt loss; not chastising patients/beauty contest. It is critical for patients to "buy in"

Types of Diets

- 1. Balanced Low Calorie: DASH or Mediterranean, emphasize fruits, veggies, whole grains, nuts, legumes, low-fat dairy, low red meat (fish and poultry), veggie oil
- 2. Low Fat: <30% of calories from fat. NOT 1980's "Low Fat" with angel food cake/bread/bagels, etc. In trials, these diets include high fruit/veggie content and whole grains
- 3. Low Carbohydrate: 60-130 grams/day. This means low Glycemic Index foods, but also in trials this means avoiding saturated fats
- 4. High protein: more satiating. Thermogenesis. Variable content
- 5. Very Low Calorie (<800 cal/day)-not long-term plan
- 6. Intermittent Fasting…

Diet Trials

- JAMA 2014 Meta-Analysis of 59 diet trials, all RCT
- -compared low-carb diet and low-fat diets vs no diet
- -both diets had about 8kg loss at 6 months and 7kg loss at 12 months, vs "no diet"
- -minimal difference between "named diets"
- -what seemed to matter was the patient participating in some form of diet, vs not participating in their health care

Diet Trials, part 2

- American Journal of Medicine, 2016 review of RCT lasting >12 months, found that Mediterranean diets =low carb diets and both better than low fat diets for weight loss. Also lower blood sugar, lipids, bp.
- Individual trials comparing macronutrients (low carb or low fat or high protein) have conflicting results
- The largest single trial, 811 obese patients, had equal weight loss across all macro groups. All diets were better than "no diet". Adherence to some diet, any diet, was better than patients not participating in their health care

Diet Trials, part 3

- "When dietary carbohydrates decrease, then dietary fats and protein must increase"

- Not in my patients!

- "Low Fat" can have many definitions

- Difficult for me to cary these trials to my clinic

Diet Trials, part 4

- Intermittent Fasting (IF) trials
  - A review of 3 trials of alternate day fasting found increased wt loss vs same macro diet, at 12 weeks
  - Another trial demonstrated that alternate day fasting had equal wt loss to a "restricted calorie diet". Both had more wt loss than "no diet" at 6 and 12 months

  I could find no trials on a more modern IF program, such as Dr. Fung's 16/8 Hour program

So what do we recommend?

- We were taught that all calories are the same, but there is ample evidence that obesity rates parallel the increase in refined/processed carbohydrates

- Refined Carb consumption leads to immediate insulin release, followed by hypoglycemia. This in turn reduces satiety and increased hunger (as in pasta or Chinese food)

- Glycemic Index (GI) rates this response

Recommendations, cont'd

- Whole grains, nuts, fruits, veggies, yogurt, legumes are high in fiber and slower to digest, to they have lower GI (so less insulin release, increased satiety, lower hunger. Also lower calorie density than refined carbs, and are associated with less wt gain
- Starchy foods, such as peas, corn, white potatoes, white rice, low-fiber breads/pasta-all associated with greater wt gain

- LOTS of info for patients on the web-macro content, meal prep, etc

Recommendations, cont'd

- Early goal of 5-7% wt loss, discuss with pt the benefits

- 5% wt loss can lower bp, sugar, lipids

- Physical activity: increased calorie consumption during exercise, also raising lean body mass will raise metabolism/resting energy needs

Recommendations, cont'd

- Self-monitoring: daily food journals, weighing regularly

- Portion control:
    - -prepared meals
    - -"fix a plate and put the rest back in the fridge"
    - -25 Minutes Rule

KISS

- Not all patients want to dive into new diets or the web
- "Low-hanging Fruit": usually can find easy food items to target, such as sugar-sweetened beverages (SSB), white potatoes/bread/pasta, fried foods, eating after dinner
- After dinner, drink H20, brush teeth, "zip it, lock it, put it in your pocket"
- Patient Choice/preference

Keto Diets, briefly

- Our bodies want to burn sugar and store excess energy as fat.
- In order to burn fat, (Ketone bodies) essentially your body has to have no available glucose
- 2 ways to get there:

  1. "keto diet", which involves complete change of diet for most folks. Carbs 0-60 grams per day

  2. IF: 8/16 hours. About 6 hours after last meal, you are living on ketone bodies. Need to HYDRATE. Macros still important

Thank You