Disclosures

None.
Objectives

• Compare and contrast popular diets and evidenced based diets as part of a patient's weight loss and maintenance goals.

• Apply evidenced based diet information to patients inquiring about following a popular diet.
DIETS THROUGH HISTORY

People love talking about how and what they’re eating. (They just couldn’t always post it to the internet).
Vinegar and Water

Timeline: 1820

Lord Byron

Diet: Small amounts of apple cider vinegar daily suppresses appetite and assists in weight loss.

Fact: Vinegar enhances satiety. Likely due to invoking feelings of nausea.

International Journal of Obesity.
May 2014
Letter on Corpulence

Timeline: 1863

William Banting

Diet:

**Breakfast**
4-5oz meat, large cup of tea (no milk or sugar), 1oz dry toast.

**Dinner**
5-6oz of any fish except salmon, any meat except pork, any vegetable except potato, 1oz dry toast, any kind of poultry or game. 2-3 glasses of good claret, sherry, or Madeira (no Champagne, Port or Beer)

**Tea**
2-3oz of fruit, cup of tea (no milk or sugar)

**Supper**
3-4oz of meat, glass or two of claret

*Avoid bread, butter, milk, sugar, beer, potatoes.*

6-8 hours of sound sleep

*Recommends not drastically changing diet without first talking to your physician*

Fact: Reduce portion sizes and consulting your physician is sound advice.
Tapeworms

Timeline: Early 1900’s.

Diet: Swallow tapeworm. Weight loss follows.

Fact: Weight loss likely to occur aided by unpleasant side effects on top of the parasitic effects.
Lucky Strike

Timeline: 1928

Diet: “Reach for a Lucky instead of a sweet”

Fact: While there is a connection between nicotine and appetite, smoking is not recommended as a healthy dieting strategy.
Ketogenic

Timeline: 1921 and now.

Initially used for pediatric epilepsy patients.

Diet: High fat, moderate protein, very low carbohydrate

Facts:
- Low carbohydrate lowers insulin spikes.
- Reducing food choices, reduces food items eaten, reducing calorie intake.
- May help regulate hormones that play a part in appetite

Eur J Clin Nutr. 2013 Jul
Gluten Free

Timeline: 1952 and now

In celiac disease, there is immune response to gluten thus needing to avoid.

Diet: excludes the protein gluten.

Fact: For the palatability of gluten free items, many refined and processed starches are added as well as fat.
EVIDENCED BASED DIETS FOR WEIGHT LOSS

What does work?
Why.

• Losing 3-5% of body weight and maintaining can have clinically relevant health improvements.(1)
  • Reductions in triglycerides
  • Blood glucose
  • Decreased risk of developing type 2 diabetes

• Losing 5-10% of body weight (in six months) and maintain can reduce
  • Low density lipoprotein
  • High density lipoprotein
  • Blood pressure

• Maintenance generally means 1 year (2)
  • There is no truly defined time for “maintenance”
How much and how fast?

- Reduction of 500-750 kcal/day
  - Woman: 1200-1500 kcal/day
  - Men: 1500-1800 kcal/day
- Reduce calories though restriction of certain food types
  - High-carbohydrate foods
  - High-fat foods
- Up to 2 pounds per week
Look AHEAD study

- RCT with 5,145 overweight/obese adults with type 2 diabetes.
- Randomized to either intensive lifestyle intervention (ILI) or usual care of diabetes support and education (DSE).
  - ILI - 8 years of comprehensive weight loss counseling
  - DSE - 8 years of periodic group education only
- 88% of both groups completed the 8 year assessment
  - ILI lost 4.7% (+/- 0.2%) of initial weight
  - DSE lost 2.1% (+/- 0.2%) of initial weight (p<0.001).
- In the ILI group, participants who lost at least 10% of weight in the first year.
  - 39.3% were able to maintain 10% at year 8
  - 25.8% were able to maintain 5-10% at year 8.
Evidenced Based Diets

<table>
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<th>Diet</th>
<th>Investigated using RCTs(^a) with evidence considered supportive for weight loss</th>
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<td>Breakfast consumption</td>
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\(^a\)RCTs=randomized controlled trials; \(^b\)DASH=Dietary Approaches to Stop Hypertension.
Small, food-based changes

- Small behavior changes
- These small changes may be easier to sustain
- Shift energy balance 100-200 kcal/day

- Avoiding sugar-sweetened beverages and replacing with water
  - Can show 2%-2.5% weight loss in six months. (5)
Portion Control Changes

- Pre-packaged where calorie amount is defined
- Portion size controlled
  - Food is delivered in specific serving size
- Communication strategies
  - Tool available to assist with choosing appropriate portion sizes
    - Eg. MyPlate
Larger, energy, macronutrient, and/or dietary pattern-based changes

• Target larger nutrients
  • Energy or macronutrient
• Target dietary pattern
  • Mediterranean diet
• Both methods shown to reduce energy intake to a negative energy balance enough to result in weight loss (1)
Larger, energy, macronutrient, and/or dietary pattern-based changes

- Explicit calorie goal
- Ad lib approach without calorie goal
  - Reduction in calories by restriction of certain food items
  - Provision of prescribed foods (meal replacement shakes)
Energy focused

- Low calorie diet (LCD)
  - >800 kcal/day, typically 1200-1600 kcal/day.
  - All food choices for meals and snacks are provided
    - Liquid shakes or bars

- Easier to adhere to given no need to be put in position to make difficult choices.
  - Six studies comparing LCD of conventional foods or meal replacements found 2.54kg and 2.43 kg greater weight loss in meal-replacement group at 3-month and 1 year follow ups. (8)
Energy Focused

- Very Low Calorie Diet (VLCD)
  - <800 kcal/day
    - Usually in form of liquid shakes
  - Designed to preserve lean body mass
    - 0.8-1.5g/kg protein x IBW
  - Appropriate only for those with BMI >30kg/m2.
- Meta-analysis of six RCTs comparing weight loss on VLCD vs LCD
  - In 4 months: -16.1% +/- 1.6% vs -9.7% +/- 2.4% of initial weight
  - In long term follow up (>1yr): -6.3% +/- 3.2% vs 5.0% +/- 4.0%. (9)
Macronutrient focused

- Low carbohydrate
  - Usually no more than 20g per day. (10)

- Weight loss between low carbohydrate and low fat are not considered to be too different
  - When paired with LCD over 12 or more months
    - LCD with Low Carbohydrate
      - Greater reduction in triglycerides and greater increase in HDL.
    - LCD with Low Fat
      - Greater reduction in LDL(1)
Macronutrient focused

- High Protein
  - Consuming at least 20% of calories from protein
  - No defined amount from fat or carbohydrate (11)
  - Energy restriction as well
  - Can be done with conventional food items or meal replacements
Dietary Pattern Focused

- Puts emphasis on overall diet rather than specific parts
  - What to eat rather than how much to eat.
Dietary Pattern Focused

• DASH
  • Developed to reduce hypertension
  • Encourages
    • Fruits, vegetables, whole grains, nuts, legumes, seeds, low-fat dairy, lean meats
  • Limits
    • Sodium, caffeine, alcohol
Dietary Pattern Focused

• Mediterranean
  • Generally the diet of Crete, Greece, southern Italy
  • Encourages
    • Fruits, vegetables, grains, nuts, seeds, minimally processed foods, olive oil, dairy products, fish and poultry
  • Discourages
    • red meat
Overall goals

Obtainable

Sustainable
Questions?
References


Helpful links

- https://www.choosemyplate.gov/
- http://www.nwcr.ws/