



# The Heart Healthy Diet

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Disclosures: None



# The Heart Healthy Diet

- Overview
  - USDA Recommendations through the Years
  - Caloric Balance
  - Macronutrients and Micronutrients
  - Types of Foods and Specific Diets
    - “Mainstream” and “Fad” Diets
  - Recommendations
  - Conclusions



## Historical Dietary Recommendations

- 1890s USDA’s “Everything in Moderation”
- 1943 USDA coined the “Basic 7”
- 1970s Sweden - “basic” and “supplementary” foods
- 1992 USDA’s “Eating Right Food Pyramid”
- 2011 USDA’s “MyPlate” balanced calorie meals
- ?? Next ??

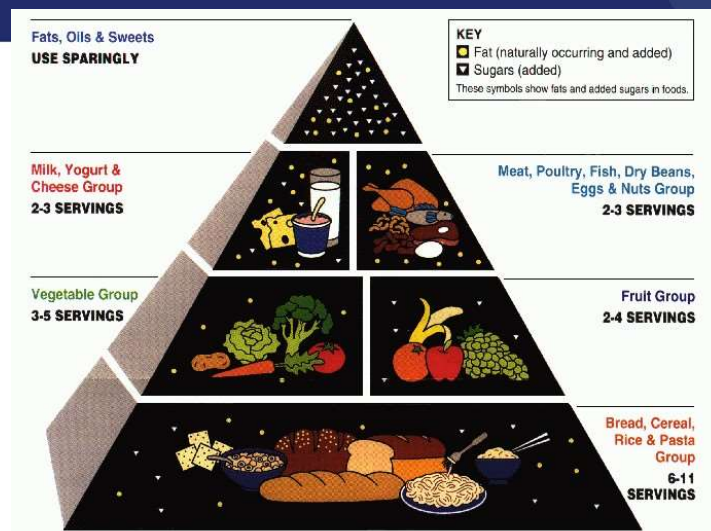


*For Health...eat some food  
from each group...every day!*



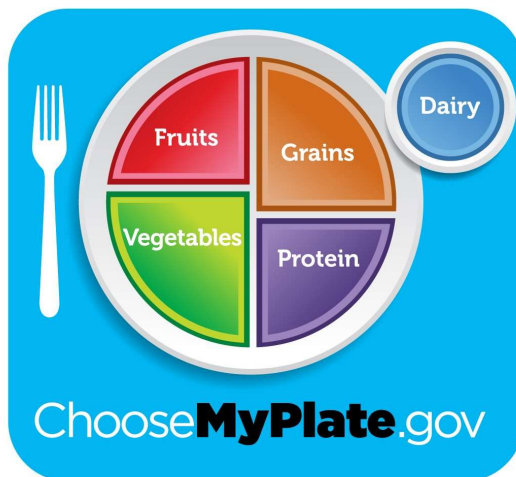
1943

## Eating Right Food Pyramid



1992

# USDA's MyPlate



2011  


## Calorie Intake Chart

IDEAL WEIGHT FOR WOMEN	CALORIES TO CONSUME IF YOU DO NOT WORKOUT	CALORIES TO CONSUME IF YOU DO WORKOUT	IDEAL WEIGHT FOR MEN	CALORIES TO CONSUME IF YOU DO NOT WORKOUT	CALORIES TO CONSUME IF YOU DO WORKOUT
110 lbs.	1,090	1,440	140 lbs.	1,527	1,927
115 lbs.	1,129	1,479	145 lbs.	1,582	1,982
120 lbs.	1,178	1,528	150 lbs.	1,636	2,036
125 lbs.	1,227	1,577	155 lbs.	1,691	2,091
130 lbs.	1,276	1,626	160 lbs.	1,745	2,145
135 lbs.	1,325	1,675	165 lbs.	1,800	2,200
140 lbs.	1,375	1,725	170 lbs.	1,855	2,255
145 lbs.	1,424	1,774	175 lbs.	1,909	2,309
150 lbs.	1,473	1,823	180 lbs.	1,964	2,364
155 lbs.	1,522	1,872	185 lbs.	2,018	2,418
160 lbs.	1,571	1,921	190 lbs.	2,073	2,473
165 lbs.	1,620	1,970	195 lbs.	2,127	2,527
170 lbs.	1,669	2,019	200 lbs.	2,182	2,582
175 lbs.	1,718	2,068	205 lbs.	2,236	2,636
180 lbs.	1,767	2,117	210 lbs.	2,291	2,691
185 lbs.	1,816	2,166	215 lbs.	2,345	2,745
190 lbs.	1,865	2,215	220 lbs.	2,400	2,800
195 lbs.	1,915	2,265	225 lbs.	2,455	2,855
200 lbs.	1,964	2,314	230 lbs.	2,509	2,909
205 lbs.	2,013	2,363	235 lbs.	2,564	2,964
210 lbs.	2,062	2,412	240 lbs.	2,618	3,018
215 lbs.	2,111	2,461	245 lbs.	2,673	3,073
220 lbs.	2,160	2,510	250 lbs.	2,727	3,127



# Caloric Balance

- The Food Pyramid drastically increased caloric intake and partially led to the obesity crisis
- Balanced caloric intake means calorie intake should equal energy expenditure in normal weight adults
- Recommended daily caloric intake is based on age, sex, weight, and activity level AND can be misleading to patients
- Calorie/Food Diary + Exercise Diary + Weight History/Change/Goal = #WeightGoals



# Macronutrients



# Macronutrients

## USDA Recommendations

- Carbohydrates (45-65%)
  - Glycemic index can be important
  - Added/processed sugar should be < 10%
- Proteins (10-35%)
  - Avoid high fat containing protein sources
  - Remember that soy, whey, and casein are proteins
- Fats (20-35%)
  - Trans fats (margarine/vegetable oils) cause CAD, n-3 polyunsaturated fats (fish oil/n-3 fatty acids) are protective
  - Too much ?
- Fibers (14g per 1000 calories)
  - Replace refined grains (white rice/bread) with whole grains (brown)
  - Can reduce risk of CAD, MI, death, DMII, and colorectal cancer



## Micronutrients - Na/Ca/Vitamins

### Sources of Sodium in Average US Diet



- 5% added while cooking
- 6% added while eating
- 12% from natural sources
- 77% from processed and prepared foods



Calcium 1200/1000



# Types of Foods

Fruits, Vegetable, Grains



#Goals - 2.5 serv Vegetable, 2 serv Fruit

Benefits - weight loss, lower mortality/  
cardiovascular disease/some cancers

Red Meat, Fries/Potato Chips, Desserts



Goals - celebratory meals

Sales Pitch - fast food, fried foods,  
frozen foods, canned food = BAD



## All the Different Diets

Low Fat

South  
Beach

Balanced  
Low Calorie

Juicing

Keto

Vegetarian

Mediterranean

Vegan

Ornish

Intermittent  
Fasting

Low Carb

DASH





# Which Diet is Best for My Patient ?

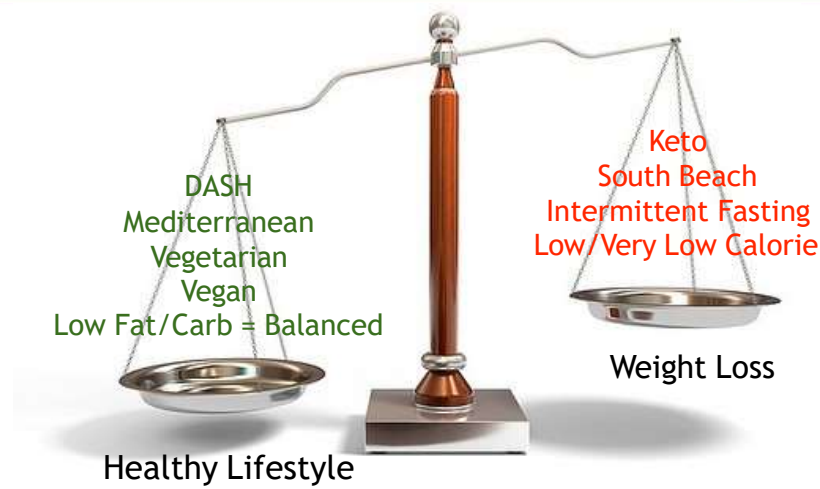
Many different types of diets have been evaluated for their overall health effects, including impact on cardiovascular disease, diabetes, hypertension, cancer, and mortality. In addition, several types of diets have been studied for effects on weight reduction, including low-carbohydrate, low-fat, low-carbohydrate, high-protein, and portion-controlled diets. These diets are discussed in detail separately.

Outside of overweight and obese populations, there are few well-designed prospective cohort studies or randomized trials comparing different diets. This is partly due to the wide variability in cultural influences on dietary patterns. It is not known which type of diet is optimal for the general population.

The World Health Organization (WHO) recommends for a healthy diet emphasize limiting the intake of saturated and trans fatty acids, free sugars, and salt, while increasing the intake of fruits, vegetables, legumes, nuts, and whole grains. Observational data from large cohorts support these recommendations.



## The Difference Between “Diets”





# Diets for Healthy Lifestyle

- **Balanced/Low Calorie** - too many trials to cover
  - **DASH** - low salt/fat with 4-5 fruit/vegetables, lowers BP and CV events
  - **Mediterranean** - olive oil for fat, think Taziki's
  - **Ornish** - <10% fat, eat fruits/vegetables/grains/dairy
  - **Pescetarian** - vegetarian + fish, hard to sell
  - **Vegetarian** - outcomes are observational, lower incidence of DM/HTN/CHD/obesity, harder to sell
  - **Vegan** - no animal products at all, hardest to sell



## Mediterranean vs Low Fat Diet

- Meta-analysis of 6 trials
- Adults with BMI 29-35
- 24 month followup
- Mediterranean beat Low Fat:
  - More weight loss (2kg)
  - Lower SBP and DBP
  - Better total and LDL cholesterol
  - Better fasting glucose



Am Journal of Medicine 2011



## Diets for Weight Loss

- **Keto** - 75% fat/20% protein/5% carbs, can be dangerous for DM/CAD
- **South Beach** - “smart” carbs (allows more than keto), “healthy” fats, lean protein
- **Atkins** - low carb, high fat/protein, 4 phases
- **Intermittent Fasting** - 16/8, Eat-Stop-Eat, 5:2
- **Cleanse Diets**
  - **Lemon Detox** - lemon/maple syrup/cayenne, 20 lbs in 10 days



## “Fad Diet” vs No Diet

Table 1. Diet Classes Based on Macronutrient Composition

Type of Diet	Branded Diets <sup>a</sup>	Carbohydrates, % kcal	Protein, % kcal	Fat, % kcal
Low carbohydrate	Atkins, South Beach, Zone	≤40	Approximately 30	30-55
Moderate macronutrients	Biggest Loser, Jenny Craig, Nutrisystem, Volumetrics, Weight Watchers	Approximately 55-60	Approximately 15	21-≤30
Low fat	Ornish, Rosemary Conley	Approximately 60	Approximately 10-15	≤20

Both diets allowed:  
7-8 kg weight loss (8 at 6m, 7 at 12m)  
vs 0 kg weight loss with no diet

JAMA. 2014;312(9):923-933



# Low Calorie/Very Low Calorie Diets

- Low Calorie Diets



- Very Low Calorie Diets



## Talking Points in Clinic

- Count Calories then Cut by 10-20%
- Either Eat Less or Burn More
- Weigh Regularly
- For Simpler Patients
  - Salad vs Dinner Plate
  - 25 Minute Rule
  - Improve Glycemic Index
  - Be Heart Healthy - "Salads not Steaks"



## #LifeGoals #WeightGoals

- Improve Diet by Calorie Reduction and Healthier Macronutrient Mix
  - *For Diabetics Specifically*, Cut Processed Sugars and Soft Drinks
  - *In Savvy Patients*, Consider Organic/Fresh-Only/Preservative-Free
- Increase Exercise to 30-40 Minutes, 4-5 Days/Week
- Attempt to Lose 5-7% of Body Weight Early
- Sustain the Weight Loss through Plateaus and then Change Calories In/Out to Lose More



## Conclusions

- The USDA recommendations have been flawed
- Caloric intake must be balanced with caloric expenditure in order to lose weight
- Fad diets can be used for weight loss
- Lifestyle diets are necessary for sustainability
- Tailor the diet and lifestyle recommendation to the individual patient
- Support the patient with info/guidance and be flexible/alter the plan as needed



# Thank You



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