



Exercise is Medicine!

Food is Fuel!

By: Wendy L. Johnson MS, RDN

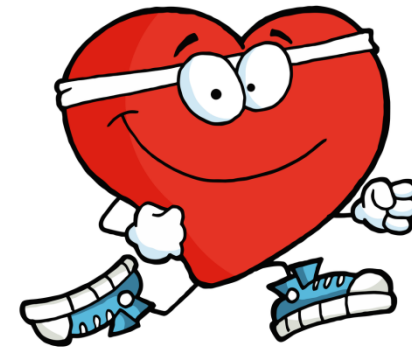
- **Would you take your prescribed medicines once or twice a week and expect them to be effective?**



Exercise is Medicine



- Cost of Inactivity
 - 250,000 premature deaths per year



Fed up with how her diet is going, Charlene takes a more serious aim at her target weight.



Exercise is Medicine- Benefits



- Regular physical activity is one of the most important things you can do for your health. It can help:
 - Control your weight
 - Reduce your risk of cardiovascular disease
 - Reduce your risk for type 2 diabetes and metabolic syndrome
<http://www.cdc.gov/diabetes/atlas/countydata/atlas.html>
 - Reduce your risk of some cancers
 - Strengthen your bones and muscles
 - Improve your mental health and mood
 - Improve your ability to do daily activities and prevent falls
 - Increase your chances of living longer
 - Quality of Life!



Benefits of Exercise-Physical



- Physical
 - Endurance
 - Improve your ability to “last longer”
 - BMR
 - Increase your daily calorie burn (at rest!)
 - Muscle Efficiency
 - Stronger-Longer
 - Reduced risk for falls
 - Stronger Bones
 - Decreased Risk for Injury
 - Reduce/Prevent Osteoporosis
 - Resting Heart Rate
 - Improves “pump efficiency”
 - Resting Blood Pressure
 - Vasodilation happens naturally
 - Improved Breathing
 - Rate and depth of breathing, less SOB



Benefits-Psychological

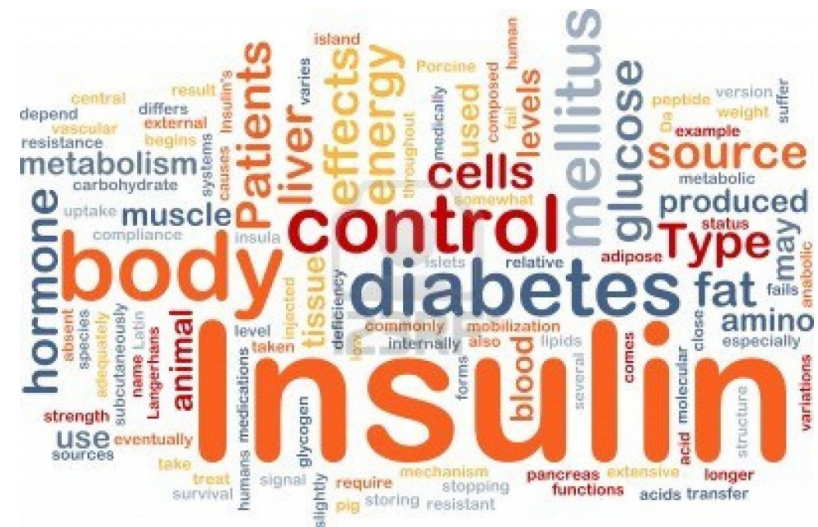


- Self Esteem/Self Confidence
- Self Confidence
- Brain Power!
 - Increase Growth Factors in Brain to make new cells and connections
 - Improves ability to learn/retain information
 - The more complicated the movement the bigger the boost
 - Ie: dance/tennis/ ZUMBA
- Stress
 - Decreases in serotonin, dopamine, norepinephrine
 - Decreases bloodflow to the area of the brain involved in causing us to relive stressful thoughts over
- Depression
 - Boosts connections between nerve cells in the brain that act as a natural anti-depressant (350 calories 3 days a week)
 - Yoga-increases brain chemicals to improve mood and decrease anxiety

Benefits-Chemical



- Cholesterol
 - Decreases: Total Cholesterol, LDL, Triglycerides
 - Increases: HDL
- Platelets
 - Less sticky
 - Decreased #
- Glucose Tolerance/Insulin Sensitivity
- Natural Anti-Inflammatory
- Decreased Circulating Cortisol
 - Weight loss
- Adrenaline Response
 - Stress



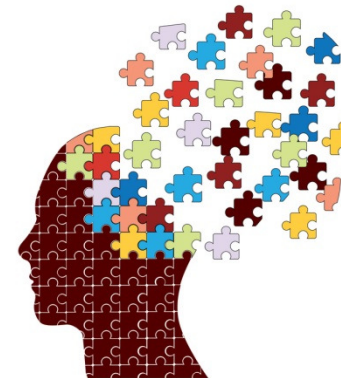
- Improvements in Cardiac Function
 - Improvement in circulation of blood
- Reduction in Blood Pressure (8-10 mm)
- Reduce your risk of developing DM / May help to slow progression of DM
- Improve DM control
- Reduction in Plaque formation
- Weight Control



Disease Prevention Alzheimer's



- Alzheimer's
 - raise brain chemicals to protect nerve cells
 - Promotes normal day and night routines
 - Improve mood
 - Improvements in cognitive function *
 - Increased blood flow to area of brain responsible for memory and higher level processing
 - 14% lower level of protein that shows brain neuron's dying/ Alzheimer's underway.
 - 70-80% of max heart rate for 30-45 mins.



Disease Prevention – Parkinson's



- Parkinson's
 - Improvements in:
 - Motor Function, Coordination, Manual Dexterity *
 - Help Brain Maintain “old” connections, form new one and restore lost ones. (improvements in neuroplasticity!) **
 - Minimum 2.5 hours per week(vigorous) = slowed the decline in QOL
 - Vigorous Exercisers have fewer brain changes caused by aging
 - Why?
 - - using dopamine in brain more efficiently
 - Modifies areas of the brain where dopamine signals are received
 - More receptors (D2) with Stronger signals being recieved

*Alberts, et al, Cleveland Clinic, ** Fisher et al USC ***
Parkinson's Outcomes Project

Disease Prevention- Cancer



- Enhanced immune function
- Enhanced antioxidant defense
- Lower Blood sugar levels, reduction in insulin sensitivity (sugar)
- Weight Control- Fat Cell produce excess estrogen
- Exercise keeps hormones at healthy levels
- Increased Life expectancy
- Decreased Cancer recurrence
- Decreases time organs are exposed to potential carcinogens (colon)
- Reduction in inflammation



Exercise Guidelines- Frequency, Intensity & Time: Cardio Exercise



- American College of Sports Medicine 8th edition

	Frequency	Intensity	Time
Sedentary-minimal physical activity, deconditioned	3-5	Light to Moderate 55-75% of Heart Rate Max	20-60 minutes (start with accumulating 20 working towards goal of 60 min)
Average/ Moderate Activity/Regular Exerciser	3-5	Moderate-Hard 75-90% of Heart Rate Max	30-90 minutes
High Amount of exercise, regular vigorous intensity exercise	3-5	80-95% of Heart Rate Max	30-90 minutes

How do you feel?



- 6
- 7 Very, Very light
- 8
- 9 Very Light
- 10
- 11 Fairly Light**
- 12**
- 13 Somewhat Hard**
- 14**
- 15 Hard**
- 16
- 17 Very Hard
- 18
- 19 Very, Very Hard
- 20

Exercise Guidelines- Frequency, Intensity & Time Strength Training/ Stretching



Strength Training

- 2-3 days per week
- 10-15 repetitions
- 8 to 10 exercises for major muscle groups
- 48 hours between strength training same body part



Stretching

- Daily
- Options:
 - Stretches
 - Yoga
 - Pilates
 - Tai Chi
 - Body Flow



Nutrition



- Review Popular Diets
- Grocery Shopping
- Eating out and Social Situation
- Fitness and Nutrition Tracking



Why do we eat?

Why do we choose what we eat?



- DASH Diet



- Paleo Diet



- Mediterranean Diet



DASH DIET-



- Dietary Approaches to Stop Hypertension
- Two levels of Sodium Intake
 - 2300mg
 - 1500mg
- Goal:
 - Improve Blood Pressure 14-16 points
 - By increasing:
 - Potassium, magnesium, calcium, protein and fiber
 - By decreasing:
 - Saturated fat, trans fat, sugars
- Intake Focus
 - Increase: Fruits, Vegetables, seeds, nuts, legume
 - Include: whole grains, low fat dairy, lean proteins
 - Reduce: Sugars, Red Meats, Saturated Fats,
 - Reduce Alcohol Intake

*NIH: Nat'l Heart, Lung, and Blood Institute

** Mayoclinic.org



DASH DIET



Following the DASH Eating Plan

Use this chart to help you plan your menus—or take it with you when you go to the store.

Food Group	Servings Per Day			Serving Sizes	Examples and Notes	Significance of Each Food Group to the DASH Eating Plan
	1,600 Calories	2,000 Calories	2,600 Calories			
Grains*	6	6–8	10–11	1 slice bread 1 oz dry cereal† ½ cup cooked rice, pasta, or cereal	Whole wheat bread and rolls, whole wheat pasta, English muffin, pita bread, bagel, cereals, grits, oatmeal, brown rice, unsalted pretzels and popcorn	Major sources of energy and fiber
Vegetables	3–4	4–5	5–6	1 cup raw leafy vegetable ½ cup cut-up raw or cooked vegetable ½ cup vegetable juice	Broccoli, carrots, collards, green beans, green peas, kale, lima beans, potatoes, spinach, squash, sweet potatoes, tomatoes	Rich sources of potassium, magnesium, and fiber
Fruits	4	4–5	5–6	1 medium fruit ¼ cup dried fruit ½ cup fresh, frozen, or canned fruit ½ cup fruit juice	Apples, apricots, bananas, dates, grapes, oranges, grapefruit, grapefruit juice, mangoes, melons, peaches, pineapples, raisins, strawberries, tangerines	Important sources of potassium, magnesium, and fiber
Fat-free or low-fat milk and milk products	2–3	2–3	3	1 cup milk or yogurt 1½ oz cheese	Fat-free (skim) or low-fat (1%) milk or buttermilk; fat-free, low-fat, or reduced-fat cheese; fat-free or low-fat regular or frozen yogurt	Major sources of calcium and protein
Lean meats, poultry, and fish	3–6	6 or less	6	1 oz cooked meats, poultry, or fish 1 egg‡	Select only lean; trim away visible fats; broil, roast, or poach; remove skin from poultry	Rich sources of protein and magnesium
Nuts, seeds, and legumes	3 per week	4–5 per week	1	⅓ cup or 1½ oz nuts 2 Tbsp peanut butter 2 Tbsp or ½ oz seeds	Almonds, hazelnuts, mixed nuts, peanuts, walnuts, sunflower seeds, peanut butter, kidney beans, lentils, split peas	Rich sources of energy, magnesium, protein, and fiber

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PALEO Diet



- Caveman Diet Ancestral Approach to Eating
- Premise:
 - What Do We Eat
 - Industrialized Foods
 - Chemicals, GMO
 - Increase Incidence of
 - CAD, DM, Auto Immune Disorders, GI disorders
- Variations
 - Low Carb, High Carb



PALEO Diet



- Include: Unprocessed Nutrient Dense Foods
 - Grass Fed & Pasteurized Meats and Eggs
 - Wild Caught Seafood
 - Organic Vegetables
 - Fruits and Nuts in Moderation
 - Nuts/Seeds in Moderation(Almonds, Walnuts, Pumpkin, Sunflower)
 - Non Gluten Grains: Almond Flour, Coconut Flour ,
 - Oils: Coconut, Avocado, Macadamia
- Avoid: Inflammatory Foods that irritate the gut & natural metabolic process
 - Gluten containing grains: wheat, Oatmeal, Pastas,
 - Rice, Millet, Potatoes
 - Legumes: Beans, Peas, Peanuts, Tofu, Soy, Lentils
 - Refined vegetable and seed oils
 - Sugar
 - Alcohol
 - Chemical concocted foods



PALEO Diet



	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Breakfast	3 eggs omelet with spinach and tomatoes	Coconut milk with almonds, blackberries and raspberries	Paleo oatmeal	2 fried eggs in coconut oil over avocado and sliced tomato	Fried eggs with sweet potato hash and bacon	Smoothie with strawberries, banana, spinach, coconut milk, whey protein	Egg muffins with spinach, red peppers, and chicken sausage
Lunch	Paleo hummus (cauliflower base) with veggies	Salad with salmon, capers, tomatoes, cucumber, lemon juice, olive oil	Salad with turkey cucumbers, tomato with Paleo honey mustard dressing	Spinach salad with shrimp, avocado, tomato, cucumber, cilantro, lemon, olive oil	Cauliflower fried rice with green onions, mushrooms	Spicy sausage with peppers, onions, and horseradish mustard	Canned salmon salad (salmon, avocado, mustard) over lettuce and sliced tomatoes
Dinner	Ginger carrot soup with shredded chicken	Chicken marinated in Dijon mustard with apples, celery, and almonds	Portabella mushrooms stuffed with spicy sausage, spinach, tomatoes	Paleo meatloaf with Paleo BBQ sauce	Chicken sautéed in coconut oil with green beans with roasted root veggies	Gluten Free Cheat (Like pasta with sardines! No? Fine. Sushi.)	Beef stir fry with peppers, carrots, zucchini and ginger
Snack	Almonds Tea Apple	Frozen Strawberries Tea Larabar	Tea Piece of dark chocolate (dairy free) Mixed nuts	Tea Coconut yogurt Frozen Blackberries	Tea Sliced tomatoes with fresh basil and olive oil	Coconut milk with berries Tea	Tea ½ protein shake with coconut milk

Mediterranean Diet

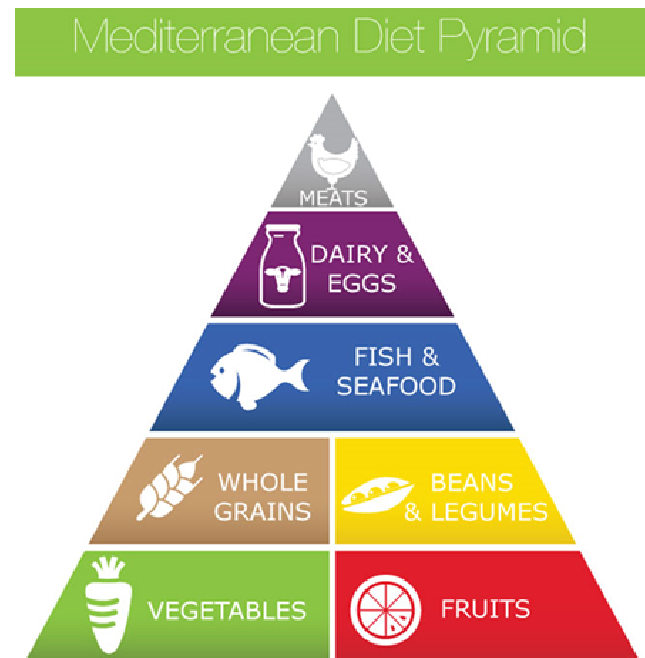


- “Overall Healthy Diet”
- Improvements in Risk for Chronic Disease
 - Reduced risk for CV mortality
 - Study done on 1.5 million healthy adults
 - Reduced risk in overall mortality
 - Reduced risk of Cancer, Parkinsons, Alzheimer’s
 - With addition of nuts and EVOO= ↓risk of Breast Ca
- Goals
 - Focus on fruits, vegetables, whole grains, reduce red meat
 - Reduced intake of saturated fats and trans fats
 - Use polyunsaturated and monounsaturated fats
 - Aids in improvements in cholesterol profile, clotting, blood pressure, blood vessels
 - Limit alcohol

Mediterranean Diet



- Include:
 - 7-10 servings of Fruits and Vegetables
 - 4-6 servings of vegetable
 - 3-4 servings of fruit
 - Switch to Whole Grains
 - Avoid refined, bleached enriched
 - Nuts!
 - Almonds, walnuts, pistachios,
 - Natural nut butters
 - Use EVOO or Canola oil, tahini spreads..
 - Herbs and spices for flavor
 - Fish
 - Twice a week
 - Oily fish (omega 3's)
 - Low Fat Dairy/ Dairy Alternatives
- Avoid/ Reduce:
 - Red Meat
 - Alcohol



Shopping



- With all the unhealthy, highly processed foods that make it to the shelves of our local grocery stores, it's important to stop and think about what we put into our bodies, where that food comes from and how it reaches us.
- Do you know what the ingredient on the label is? How to pronounce it?
- Consider Local CSA's

Fruits and Veggies



- Ideal- Fresh Fruit and Fresh Veggies
 - Organic?
- Frozen Fruit and Veggies
- Canned?- only if you have to....
 - Veggies-**No Sodium Added**- then rinse
 - Fruits: Beware the sugar!



Fruits and Veggies



- Make it a Rainbow

- Red/Orange

- Tomatoes, carrots, strawberries, peaches, sweet potatoes, apricots, tangerines

- Yellow/Green

- Spinach, broccoli, celery, pineapple, corn, kiwi, asparagus

- Blue/Purple

- Eggplant, beets, blueberries, blackberries, purple cabbage

- White/Light

- Onion, mushrooms, cauliflower, pears, bananas, jicama



Fish/Seafood



- Farm Raised vs. Wild Caught
 - Where caught?
- Color
 - White, light- lean protein
 - Cod, mahi-mahi
 - Darker fish- lean protein, high in Polyunsaturated Fats
 - Tuna, Halibut, Orange Roughy..
- Canned
 - Choose canned in water, low sodium
 - Tuna and salmon
- Shellfish-
 - Shrimp ,crab, lobster, mussels, scallops, clams, oysters.....



Meat Section



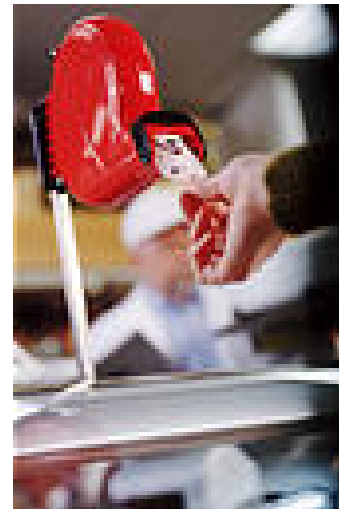
- Red Meats- maximum - twice a week (4 oz)
 - Beef, Lamb, Pork ,Venison, Veal
- Ideal: Grass Fed – No Hormones
- Skinny Cuts
 - Beef, Veal: “round”, “loin”
 - Lean Ground Beef >92%
 - Pork, Lamb: “leg”, “loin”
 - Grass Fed,
 - Venison
 - Less marbling



Meat Section



- Avoid Organ meats-↑ fat ↑ cholesterol
- Bacon:-Have you tried Canadian Bacon?
- Buy value, portion out and freeze at home
- Try to avoid processed meats..but-----
 - Ask for lean, low fat,
 - low/no sodium



Poultry Section



- Lean varieties
 - chicken, turkey, pheasant, quail
 - limit Duck & Goose- high in sat fats
- Skinless
 - 50% ↓ fat grams(total and saturated)
- Lean Cuts
 - Breast
- Ground Turkey Breast 👍
 - avoid “ground with Dark Meat/Skin”



Dairy Products



- 3 servings a day!
- Cheese-
- Low fat Dairy
 - 1% or skim milk
 - 2% or lower greek yogurts, cottage cheese
 - Greek Yogurt > protein , plain < sugar
- Dairy Alternatives
 - Soy milk, Almond Milk, Rice Milk
 - Be careful of flavors = inc. sugar



Grains/Bakery Items



- “Whole” grain Breads, Pastas, Cereals
 - Cheerios (yellow box), Bran, Flaxseed, Oatmeal
- Brown Rice, Wild Rice, Bulgur, Couscous, Kasha, Quinoa, Barley
- Avoid on the ingredient list
 - Enriched, Bleached, Fortified, Corn Meal
- Avoid-
 - (croissants, doughnuts, cookies, cakes most crackers, WhiteWheat, WheatWhite...)

Oils and Seasonings



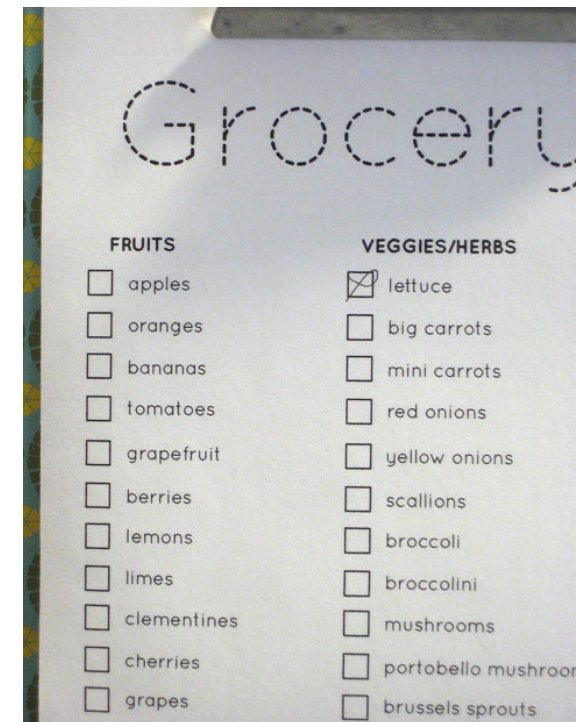
- Choose Healthy Oils
 - Extra Virgin Olive oil, Canola oil, Flaxseed Oil
 - Avoid- Corn oil, Vegetable Oil
 - Use Fresh herbs, spices
 - I.e.- crushed red pepper, cumin, turmeric, garlic, mustard seeds, oregano, chili powder....
- Avoid seasonings with sodium
- Avoid seasoned salts
 - (garlic salt, onion salt.....)



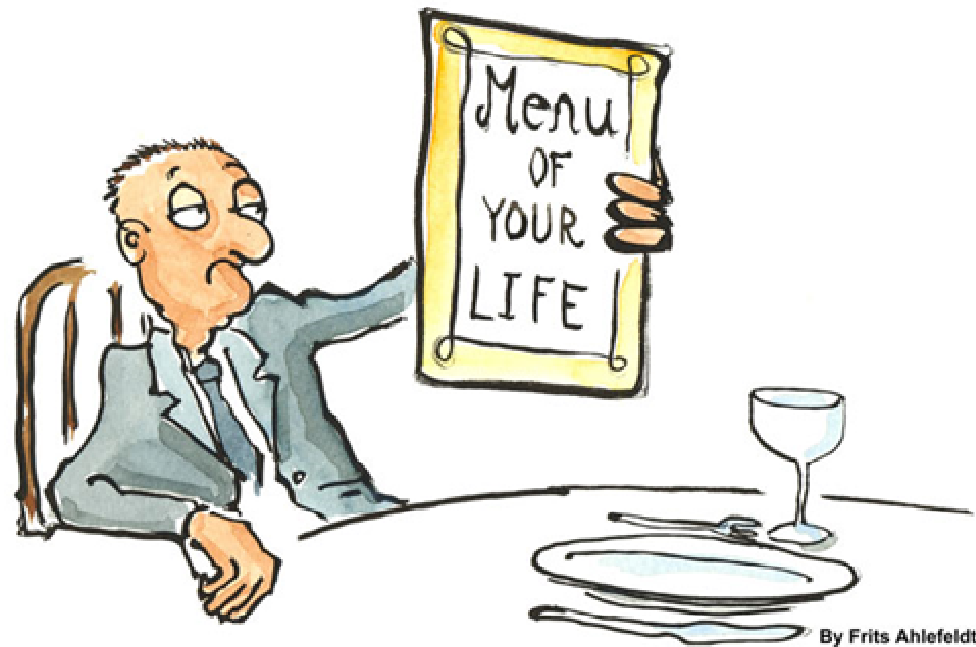
Shopping



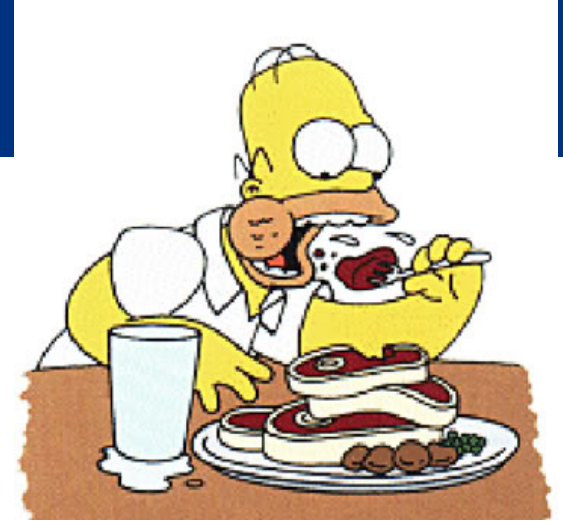
- Decide on recipes for 3-4 days (2 trips per week)
- Write all ingredients needed
- Look in your pantry first
- Reduces impulse buying
- **STICK TO THE LIST!!!**
- **DON'T GO HUNGRY!!**



What's on the Menu?



- Eating out is a special treat
- Plan ahead
 - where, what's on menu, call ahead, sharing
 - Find Restaurant Menu, Nutrition Facts online
- Eat/Order out 1-2 times a month
 - It's a Treat not a meal plan!
- Avoid buffets/ all-you-can eat
- If at a party / BBQ- eat a light meal before you go



Appetizers



- Salad-
 - ask for low-fat/fat free
 - Oil & vinegar
 - Dressing on the side
- Breadbasket
 - Avoid
 - Ask for whole grain
 - No butter
- Avoid key words
 - Crispy, Crunch, Fried



Entree



- Choose-lean meats, skinless chicken, fish
- Choose-Grilled/ Broiled/Roasted/Baked selections
- Avoid: sautéed and fried, marinated in oil, breaded, crispy, creamed, buttered



Entree



- Ask how prepared if unsure
- Ask for nutrition facts sheets
- Choose healthy selections
- Pasta Dishes
 - Choose tomato based sauces vs cream

Dessert



- Fresh fruit
- Sorbet or sherbert
- Frozen Yogurt
- Share



Portion Sizes



- Rule of thumb- plate contents 2x necessary portion size
- Plan to split a meal
- Plan to take 1/2 home
 - Ask for the take home box when your meal comes!
- At a party use the size of the palm of your hand as a serving size guide to manage portion control.



Etc.



- Beverages
 - water is best, 1 glass of wine
- Side dishes
 - potatoes
 - baked(try salsa) avoid toppings, avoid mashed/fried
 - rice
 - brown, long grain, wild rice
 - vegetables
 - grilled, steamed



Tracking — Exercise & Nutrition

Fitness Trackers*

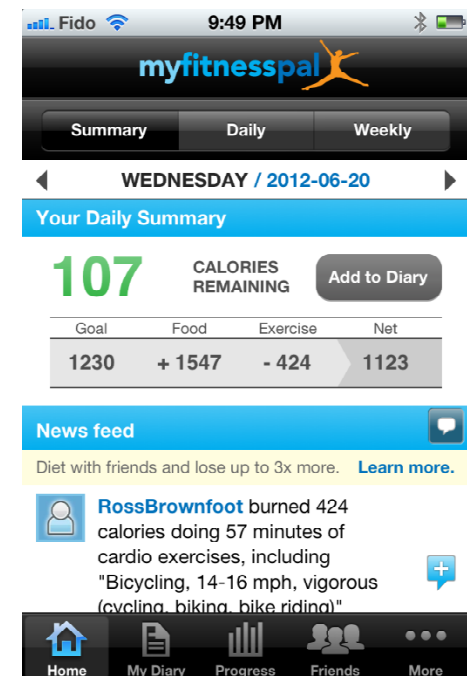
- Fitbit-Surge
- Basis Peak
- Fitbit-Charge HR
- MIO-Fuse
- Garmin-Vivoactive



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Tracking Apps**

- LoseIT
- My Fitness Pal
- Map My Fitness
- Fitbit



Diet and Exercise together provide the best defense in disease prevention, progress and rehabilitation

You can't out exercise a bad diet"

Resources



- ACSM Guidelines for Exercise Testing and Prescription
- CDC.org
- www.eatright.org
- www.mayoclinic.org
- www.allrecipes.com

Final Thoughts



- http://nihseniorhealth.gov/exerciseforolderadults/healthbenefits/video/e7_na.html?intro=yes
- <https://youtu.be/UUP2Z-QxNI>