



# Nutrition

# OBJECTIVES



**Insulin response  
in PWS**

**Nutritional  
recommendations  
for PWS**

**Components  
of a healthy  
diet**

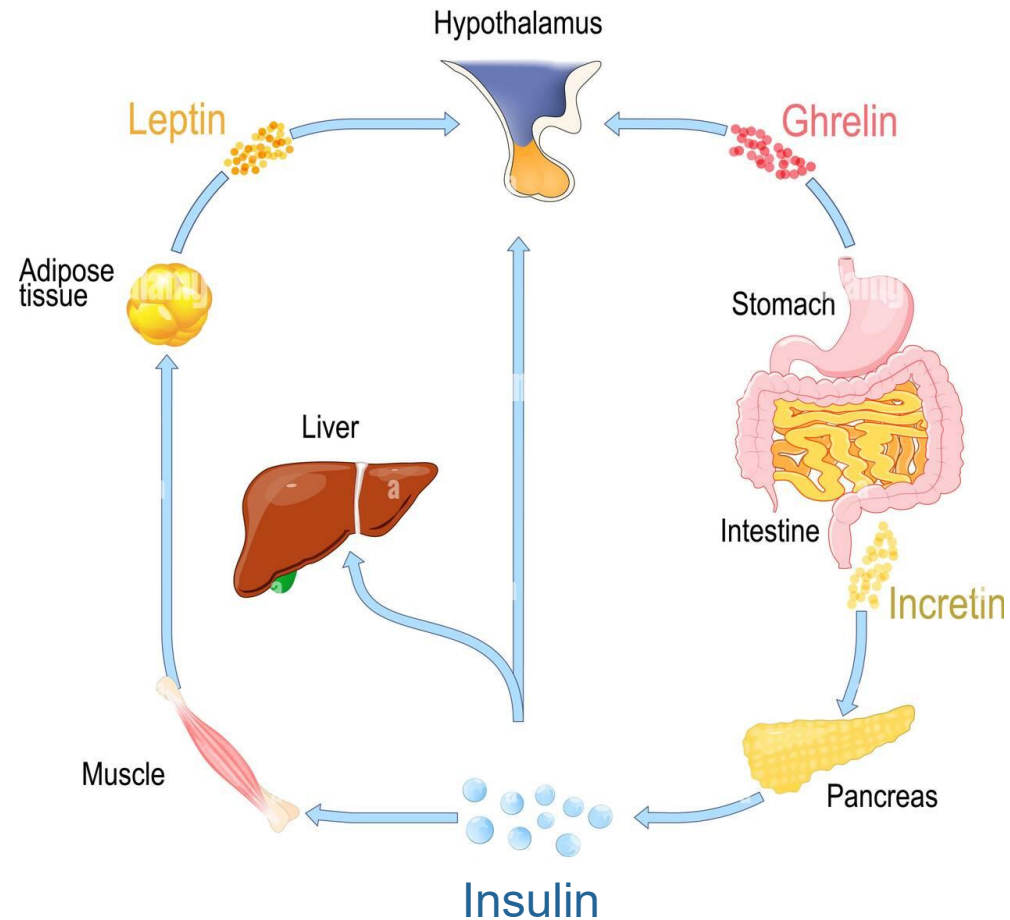
**How to create  
a meal plan**

**Preparing  
and  
portioning  
meals**

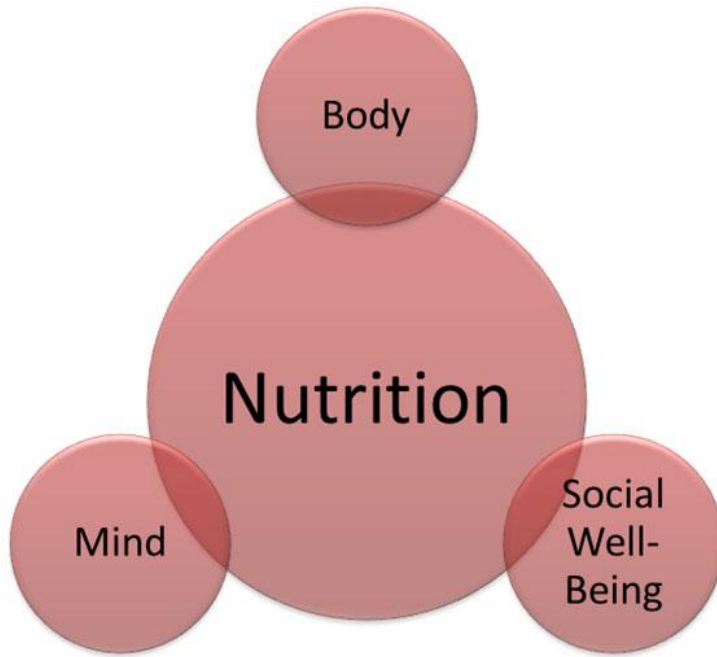
# INSULIN RESPONSE IN PRADER-WILLI SYNDROME



## Hunger hormones



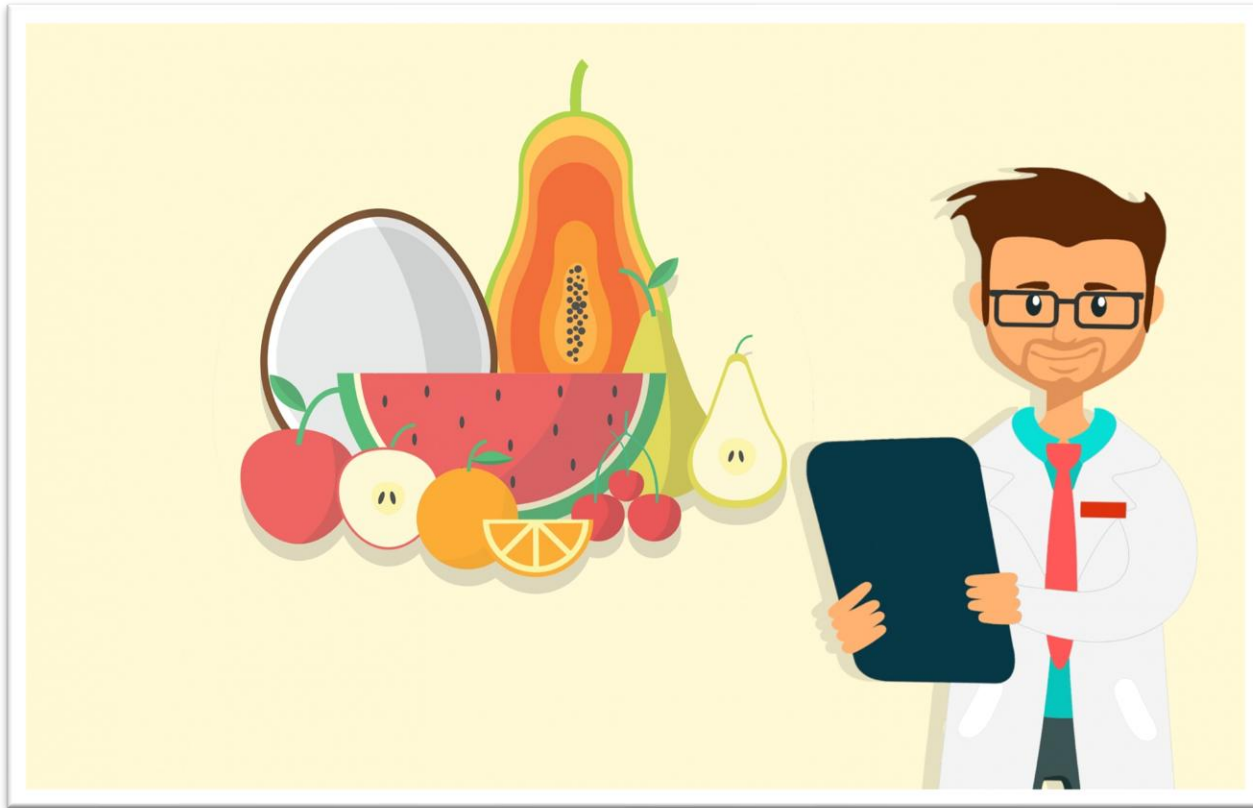
# NUTRITIONAL RECOMMENDATIONS



800 – 1200 Calories / day as recommended by RD or Physician

- 800 - 1000 calories is typically for weight loss
- 1000 – 1200 calories is typically for weight maintenance
- There are a few cases of higher caloric needs

# NUTRITION



- Caloric / Macro intake should be calculated by a Registered Dietitian in conjunction with a physician
- Menus should be approved by the RD with input from the individuals
- All substitutions and reductions should be approved by the RD when possible





# MANAGING WEIGHT

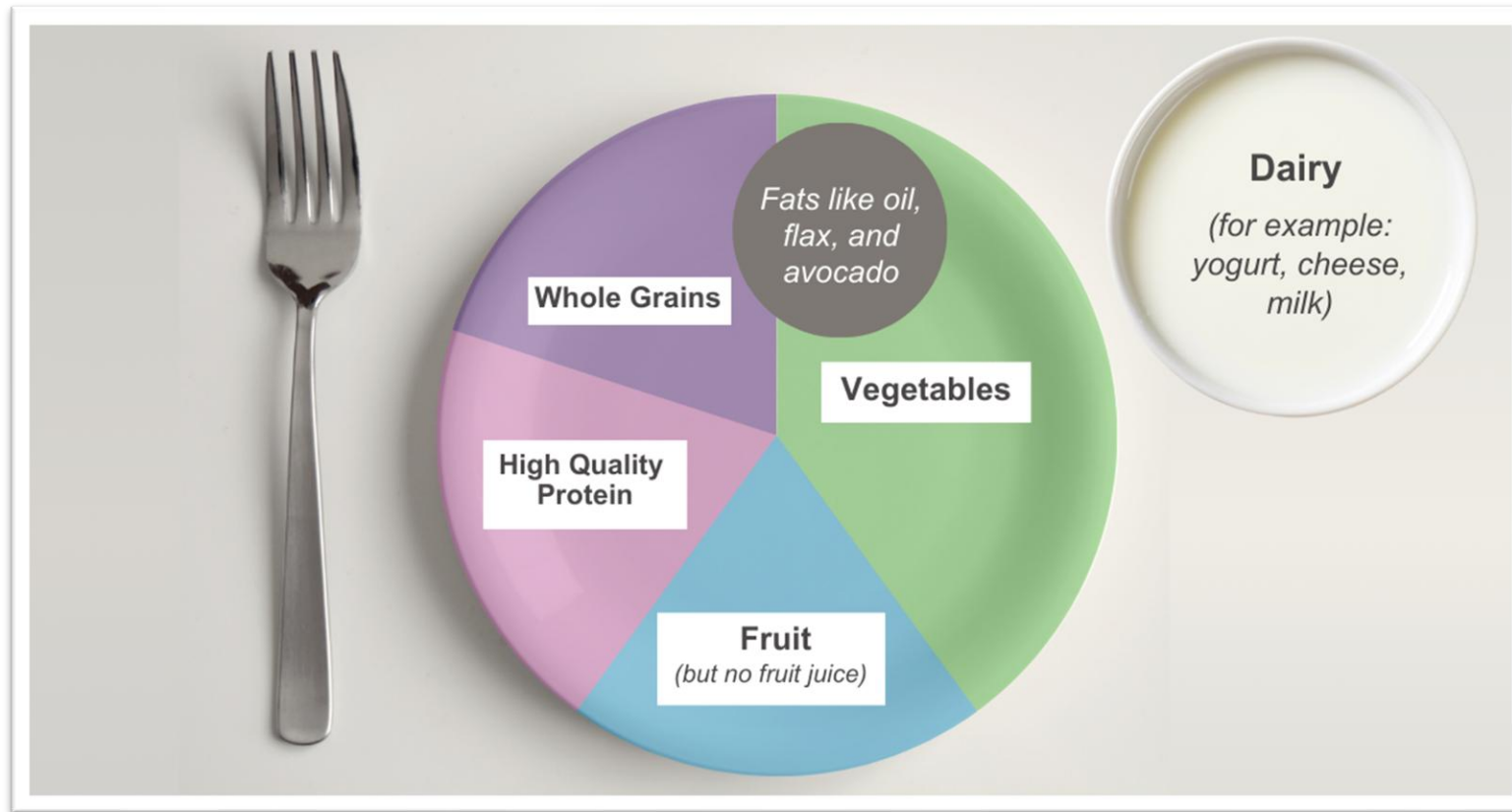


# NUTRITION

## General Healthy Portioning vs PWS portioning



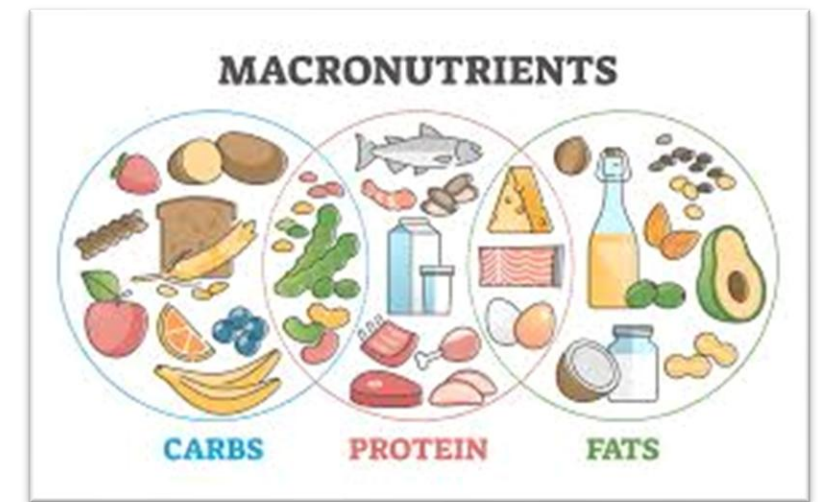
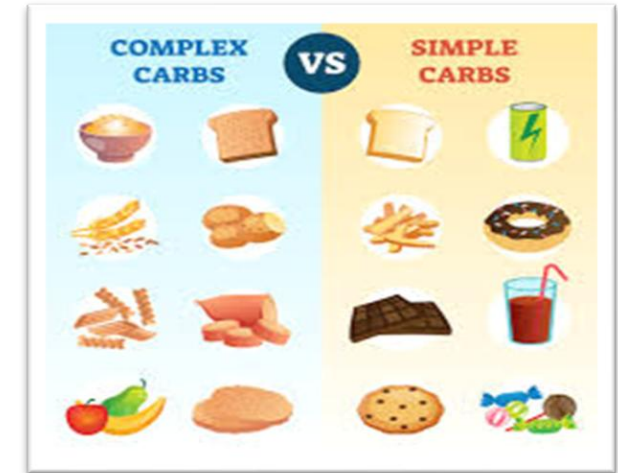
### ***Prader-Willi Plate***





# KEY TO GOOD NUTRITION

- The key to good nutrition is ensuring meals and snacks are well-balanced
  - Use complex carbs vs. simple carbs
  - Pair carbs with protein or a healthy fat.  
No Carb only snacks





# Components of a well-balanced diet



- Vegetables: Loaded with vitamins and minerals
- Carbohydrates such as bread, starchy vegetables and fruit are used by the body for energy and are a good source of vitamins and minerals.
- Protein, found in meat, eggs, dried beans, peas and non-fat dairy products, is used by the body to build new tissue.
- Fats such as margarine, mayonnaise and salad dressings are concentrated sources of calories and should be limited and paired with a protein or carb not eaten alone.

# HEALTHY MEAL BUILDING



**Pick one (or more) from each category to build meals.**

**Vegetables** (non-starchy) – carrots, cucumbers, green beans, broccoli, cauliflower, spinach, lettuce, tomatoes, celery, zucchini, yellow squash, asparagus, bell peppers, onions, Brussel sprouts, artichoke, cabbage, kale, snap peas, Okra, collards, Bok choy, eggplant, spaghetti squash, Swiss chard, turnips

**Protein** – Beef, pork, chicken, turkey, salmon, tuna, white fish, shrimp, crab, lobster, scallops, clams, eggs, Greek yogurt, nuts, seeds, cottage cheese, duck, soy, tofu, tempeh, lamb, goat

**Carbohydrates** – WHOLE grain bread, WHOLE grain pasta, quinoa, brown rice, wild rice, barley, oatmeal black beans, kidney beans, pinto beans, white beans, lima beans, chickpeas, green peas, hummus, black-eyed peas, edamame, lentils, sweet potato, potato, whole grain couscous, farro, millet, pumpkin, butternut squash, acorn squash, popcorn, buckwheat, amaranth

- Ensure there is a source of Fat at each meal as well, preferably Unsaturated Fat (oils, nuts, seeds, avocado, fish, etc.)
- Fruit can be included with the meal as well, but only 2 servings per day of fruit. If using canned fruits, make sure there is no added sugar or syrup.
- No carb only snacks. If carb is included at a snack, ensure there is a protein and/or fat with it.



## Carbohydrates

Breads  
Rices  
Couscous  
Bran  
Potatoes  
Pasta  
Oats  
Cream of Wheat  
Corn  
English Muffin  
Pancakes  
Whole Wheat/  
Whole Grains  
Squash  
Pumpkin  
Berries  
Fruits  
Sugars

## Proteins

Chicken  
Turkey  
Egg Whites  
Fish  
Buffalo  
Bison  
Whey Protein  
Turkey Bacon  
Lean Beef  
Low/Non-fat  
Cottage Cheese  
Low/Non-fat  
Greek Yogurt

## Fats

Avocado  
Nut Butters  
Egg Yolks  
Nuts  
Oils  
Olives  
Flaxseed

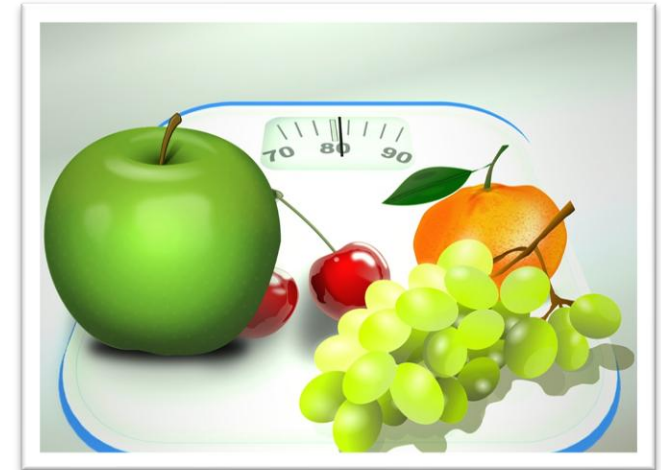
Beans  
Sprouts  
Grains  
Quinoa  
Most  
Yogurts  
Skim  
Milk  
Peas

Eggs  
Salmon  
Bacon  
Chia Seeds  
Cottage Cheese  
Whole Fat Milk  
Duck  
Whole-fat  
Yogurt

# NUTRITION



- Portioning Food
- Weigh and measure everything, every time





# SAMPLE MENU

| Breakfast   | Calorie | Lunch   | Calorie | Dinner  | Calorie |  |      |
|---|---------|---|---------|---|---------|--|------|
| Hard boiled egg with toast                            |         | Ham and Cheese Sandwich   |         | Baked Fish with potato                              |         |  |      |
| 8oz decaf coffee or tea                               | 0       | Crystal light   | 0       | Crystal light                                       | 0       |  |      |
| 4 oz skim milk  | 45      | 3oz ham sandwich meat   | 105     | 4 oz baked fish with lemon pepper                   | 140     |  |      |
| 1 splenda packet                                      | 0       | 1 TBSP Fat free Mayo (best if made with avocado oil) or mustard | 10      | 1 small baked potato with 2 sprays butter           | 80      |  |      |
| 2 slice Healthy Life Whole Grain toast                | 70      | 1 slice Healthy Life Whole Grain toast (65)                     | 65      | 1 cup cooked green beans                            | 80      |  |      |
| 1 hard boiled egg                                     | 70      | 1 cup lettuce   |         | 2 TSP Mrs. Dash seasoning                           | 0       |  |      |
| 1 tsp everythng bagel seasoning                       |         | 1 cup mixed raw veggies   | 25      |   |         |  |      |
| 1 medium apple sliced                                 | 95      | 2 tsp low fat salad dressing                                    | 15      |   |         |  |      |
| 1 TBSP cinnamon                                       |         | 1 Dole fruit cup ( no sugar added)                              | 70      |   |         |  |      |
| 1 spray of I can't believe it's not butter (on toast) | 0       |   |         |   |         |  |      |
| Sugar-free, Zero calorie drink                        |         | 1 rice cake (35) with 1 TBSP PB2 (30)                           | 65      | Snack 1 cup popcorn and 1 stick light string cheese | 75      |  |      |
| Total   | 280     |   | 355     |   | 375     |  | 1010 |





# SAMPLE MENU

| Breakfast                                      | Calorie | Lunch  | Calorie | Dinner  | Calorie |      |
|--|---------|--|---------|---|---------|------|
| Waffle   |         | PBJ sandwich                                   |         | Chicken Sandwich with fries                         |         |      |
| 8oz decaf coffee or tea                        | 0       | Crystal Light                                  | 0       | 4 oz skim milk                                      | 45      |      |
| 4 oz skim milk                                 | 45      | 2 slice Healthy Life Whole Grain bread         | 130     | 4 oz baked, boneless, skinless chicken breast       | 110     |      |
| 1 spleda packet                                | 0       | 2 TBSP PB2 (made thin side)                    | 60      | 1 light hamburger bun                               | 80      |      |
| 1 frozen waffle ( great value) (90each)        | 90      | 1 TBSP no sugar added Jelly (25)               | 25      | 1 cup Lettuce and veggies with dressing             | 35      |      |
| 2 Jimmy Dean breakfast sausage links (33 each) | 66      | 1 light string cheese (45 cal/stick)           | 45      | 1 TBSP sugar-free Ketchup                           | 10      |      |
| 1 TBSP light syrup (25 each)                   | 25      | 1 dill pickle spears                           | 5       | 2 oz sweet potato fries - baked Great value         | 200     |      |
|  |         | 1 cup mixed raw veggies sprinkle with Mrs Dash | 25      | 1 TBSP BBQ sauce                                    | 10      |      |
| 1/2 apple sliced with TBSP PB2                 | 75      | dole fruit cup                                 | 60      | Snack 1 cup popcorn and 1 stick light string cheese | 75      |      |
| Total  | 301     |  | 350     |   | 565     | 1210 |

# SPECIAL OCCASIONS



## Going out to eat



# CELEBRATIONS





# IN CONCLUSION

When we look at weight management and health, we need to look at:

**Meal Planning** – doesn't have to be complicated

Portion control

Well balanced

Make room for special events

**Daily exercise / physical activity**

Make it fun

Make it routine





# Open Discussion

## Q & A





# RESOURCES

**PWSA | USA Medical Alert booklet**



[www.pwsausa.org](http://www.pwsausa.org)



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