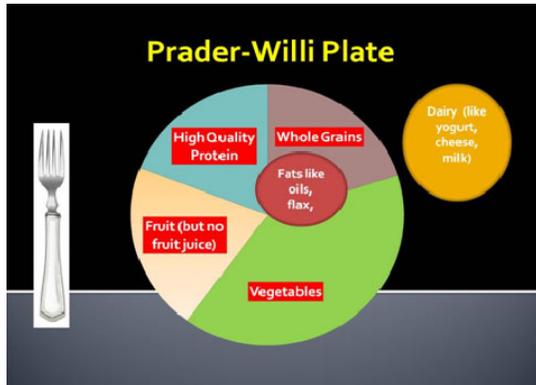


My Plate Redefined for Persons with PWS



Prader-Willi Plate concept by Melanie Silverman, R.D.

- **Fluids:** Minimum 8 cups per day of water
 - **Note:** Add fruit or vegetables such as strawberries or cucumbers to flavor the water, or serve commercially sugar-free flavored water
- **Fruit:** 2 servings per day
 - **One serving is:**
 - ½ cup fresh, frozen, or canned fruit
 - 1 medium piece of fruit
 - 1 cup berries or melon
 - ½ cup dried fruit
 - ½ cup (4 fl. oz.) 100% fruit juice (**without sugar and less than 4 fl. oz. per day**)
- **Dairy:** 2 servings per day
 - **Note:** Choose low-fat or fat-free products
 - **One serving is:**
 - 1 cup milk
 - 1.5 ounces reduced-fat hard cheese
 - 2 ounces processed cheese
 - 1 cup low-fat yogurt
 - 1/3 cup shredded cheese
- **Vegetables:** 6-8 servings per day
 - **Note:** At meals try to fill half your plate with vegetables.
 - **One serving is:**
 - ½ cup cut raw or cooked
 - 1 cup raw leafy vegetables
 - ½ cup vegetable juice

- **Grains/Starches:** 3-5 servings per day
 - **Note:** Choose whole grains
 - **One serving is:**
 - 1 slice of bread
 - 1 cup dry cereal
 - ½ cup cooked rice, pasta, or cereal
 - 1 5-inch tortilla
 - ½ baked sweet potato
- **Protein:** 1-2 servings per day
 - **Note:** Choose lean meat and fish
 - **One serving is:**
 - 1 ounce cooked lean beef, pork, lamb, or ham
 - 1 ounce cooked chicken or turkey (no skin)
 - 1 ounce cooked fish (not fried)
 - 1 egg
 - ½ ounce nuts or seeds
 - 1 tablespoon peanut or almond butter
 - ½ cup tofu
 - 2 tablespoons hummus

Limit fats, sugar, and salt:

- Limit extras which include solid fats (i.e., butter, stick margarine, shortening, and lard) and sugars (i.e. candy, pastries and soft drinks).
- Cut back on salt. Stay under **2,300 mg of salt per day as recommended by American Heart Association.**



This brochure was prepared by the Department of Kinesiology at California State University, Fullerton for the Prader-Willi California Foundation, a non-profit 501(c)(3) charitable corporation established in 1979. To learn more about Prader-Willi syndrome visit www.PWCF.org

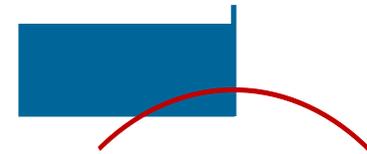


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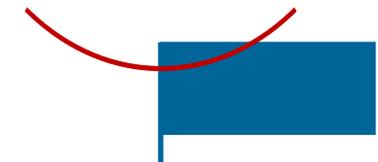


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Nutrition & Physical Activity Guidelines



For the Individual with Prader-Willi Syndrome



The Importance of Good Nutrition in Persons with Prader-Willi Syndrome

Prader-Willi syndrome (pronounced PRAH-der-WILL-ee) is the most common known genetic condition that can lead to life threatening obesity.

People with Prader-Willi syndrome (PWS) experience a host of challenges including weak muscles, problems with balance and coordination, developmental delays, speech and language problems, and behavior problems similar to autism, just to name a few.

PWS is best known, however, for its hallmark symptom called hyperphagia which causes the individual to want to eat all of the time. **Persons with PWS experience a constant, physiological drive to eat that is never satisfied no matter how much food is eaten.** At the same time, the metabolism rate slows to about half what it should be. If calorie intake is not significantly reduced and strictly controlled, persons with PWS will quickly gain an enormous amount of weight.

Obesity can lead to health problems such as high cholesterol and triglycerides, type 2 diabetes, sleep apnea, high blood pressure, heart disease, and death. **In addition to the risk for morbid obesity, persons with PWS are more susceptible to an acute stomach rupture if they eat too much food. Those who are thin are at greater risk for stomach rupture.**

Due to the increased susceptibility for morbid obesity and stomach rupture in persons with PWS, it is imperative to prevent unhealthy weight gain by maintaining a strict diet and a daily physical activity regimen.

In this brochure you will find guidelines for dietary management and physical activity. It is important to recognize that some of these guidelines will need to be adapted to the specific needs of the individual with PWS.



Five Main Aspects of Weight Management

1. **Quantity:** It is important to determine and not exceed the limit of total daily calories. Let your doctor or a registered dietitian know that guidelines for weight management for children with PWS has been reported as 8 to 11 kcal/cm/day, with weight loss documented with intakes of 7 kcal/cm/day. General recommendations for adolescents and adults with PWS are between 800 to 1,000 kcal/day for weight loss.
2. **Quality:** It is best to offer high quality foods which are low in fat and sugar, but are high in nutrients such as vitamins and fiber to help maintain the function of their metabolism and to help maintain energy balance.
3. **Remove temptation:** Persons with PWS cannot manage their own food intake because their brain drives them to eat as much food as possible. Monitor and control access to food at all times to reduce pressure on the individual with PWS. This will eliminate the anxiety associated with temptation and promote better behavior and fewer instances of tantrums.
4. **Behavior:** Establishing good eating habits and routines is critical. To improve behavior, persons with PWS need to know *that* they will eat and *when* they will eat. Schedule consistent meal and snack times and provide healthy food choices.
5. **Supplementation:** Persons with PWS are at higher risk for vitamin and mineral deficiencies as well as osteoporosis. A complete multivitamin/mineral supplement and additional calcium should be considered to supplement their diet. Ask your doctor or registered dietitian for specific recommendations.



Low Fat Cooking Tips

- Choose lean cuts of meat (30% fat or lower) and remove the skin and all visible fat.
- Avoid frying foods and opt for other cooking methods such as grilling, baking, steaming, and microwaving.
- Roast meat on a rack to allow the fat to drain away.
- Roast vegetables without added fat such as butter or oil.
- Allow soups and stews to cool and then skim off surface fat.
- Avoid creamy sauces and high fat gravies.
- Use low-fat dairy products instead of whole fat varieties.
- Use low calorie salad dressing, balsamic vinegar, wine vinegar, or lemon juice as dressing.
- Instead of butter or margarine on bread use condiments such as mustard or low-fat mayonnaise.
- Limit take-out and fast foods.
- Limit oils to 4 teaspoons per day. This includes vegetable oil, mayonnaise, soft margarine, salad dressing, nuts, olives, and avocados.
- Avoid rich cakes and pastries.

Why Increasing Physical Activity Is Important

Daily physical activity has many benefits. Physical activity enhances aerobic fitness and energy expenditure while minimizing the loss of muscle mass and muscle tone. Physical activity helps the body burn unwanted fat, while a lack of physical activity can decrease the tone and strength of the muscles. Physical activity helps develop bone strength, keeps the heart healthy, and increases endurance, flexibility, and stamina. Physical activity improves mood through the release of endorphins and decreases feelings of depression and anxiety. In general children and adolescents should get a minimum of 60 minutes a day of physical activity when maintaining weight. Twice a week activities should include strengthening exercises to build muscle and bone. More minutes are needed when aiming to lose body weight. Ask your doctor, specialized trainer, and/or physiotherapist for specific recommendations on physical activity.