A low copper diet is generally adequate in all the nutrients necessary for good health. However, patients taking D-penicillamine may develop a deficiency of vitamin B-6 (pyridoxine), and the physician may prescribe a supplement of 25 mg daily.

## Special Considerations

1. The copper content in a specific food can vary depending on a number of factors. The copper content and the location of the soil in which the food was grown, or the method used to process the food, for example, can affect how much copper is in the food when eaten. In general, the low copper diet is meant to restrict foods that are usually high in copper, especially organ meats, shellfish, dried beans, peas, whole wheat, and chocolate.
2. Drinking water should be analyzed because it may contain too much copper. If the water contains more than 100 micrograms per liter, then bottled demineralized water should be used. This water should contain only 1 microgram of copper per liter. Demineralized water and distilled water are processed differently and may not contain the same amount of copper. Check with the physician or registered dietitian for more information.
3. Avoid drinking alcohol. It can be harmful to the liver, and the liver may already be damaged from Wilson's disease.
4. Read food labels; some prepared foods list the copper content. Always check the labels of vitamin/mineral supplements to see if they contain copper.
5. For better control of copper intake, choose only average portions or serving sizes of foods. Examples of average portions are 3 to 4 oz of meat, fish, or poultry; $1 / 2$ cup of vegetables; one slice of bread.
6. Do not use copper cooking utensils.
7. Patient's with Wilson's disease should have initial and periodic consultations with a registered dietitian to make sure copper in the diet is being adequately controlled.

| Low Copper Diet |  |  |  |
| :--- | :--- | :--- | :--- |
|  | Eat as Desired <br> Foods low in <br> copper -- less than <br> 0.1 mg/portion. | 6 Portions/Day | Avoid |
|  <br> meat <br> substitute beef; eggs; white <br> meat turkey and <br> chicken; cold cuts <br> and frankfurters <br> taht do not contain <br> pork, dark turkey, <br> dark chicken, or <br> organ meats; all <br> others not listed on <br> high or moderate all fish except <br> shellfish 3 oz, dark <br> meat turkey and <br> chicken 3 oz, peanut <br> butter 2 Tbsp <br> lamb; pork;   <br> pheasant quail;   <br> duck; goose; squid;   <br> salmon; organ   <br> meats including   <br> liver, heart, kidney,   <br> brain; shellfish   <br> including oysters,   <br> scallops, shrimp,   <br> lobster, clams, and   |  |  |  |


|  | list |  | crab; meat gelatin; soy protein meat substitutes; tofu; nuts and seeds |
| :---: | :---: | :---: | :---: |
| Vegetables | most vegetables including fresh tomatoes | bean sprouts 1 cup; beets $1 / 2$ cup; spinach $1 / 2$ cup cooked, 1 cup raw; tomato juice and other tomato products $1 / 2$ cup; broccoli $1 / 2$ cup; asparagus $1 / 2$ cup | vegetable juice cocktail, mushrooms |
| Fruits | most fruits except as listed to right Fruits dried at home are permitted | mango $1 / 2$ cup, papaya $1 / 4$ average, pear 1 medium, pineapple $1 / 2$ cup | nectarine, commercially dried fruits including raisins, dates, prunes; avocado |
| Starches breads \& grains | breads \& pasta from refined flour, rice, regular oatmeal, cereals with $<0.1 \mathrm{mg}$ of copper per serving (check sweet potatoes, all others not listed on high or moderate list | whole wheat bread 1 slice, Melba toast 4, whole wheat crackers 6, instant oatmeal $1 / 2$ cup, instant Ralston ${ }^{\text {TM }}$ $1 / 2$ cup, cereals with 0.1 to 0.2 mg of copper per serving (check label), dehydrated and canned soups 1 cup, potatoes in any form $1 / 2$ cup or small, pumpkin 3/4 cup, parsnips $2 / 3$ cup, winter and summer squash $1 / 2$ cup, green peas $1 / 2$ cup | dried beans including soy beans, lima beans, baked beans, garbanzo beans, pinto beans; dried peas; lentils; millet; barley; wheat germ; bran breads and cereals; cereals with $>0.2 \mathrm{mg}$ of copper per serving (check label); soy flour; soy grits; fresh sweet potatoes |
| Fats, oils | butter, cream, margarine, mayonnaise, nondairy creamer, sour cream, oils, salad dressings (made from allowed ingredients) | olives 2 med |  |
| Milk \& milk products | Most milk products, milk flavored with carob, cheeses, cottage cheese | all others | chocolate milk, soy milk, cocoa |


|  <br> desserts most sweets; jams, <br> jellies, and candies <br> made with allowed <br> ingredients; carob; <br> flavoring extracts licorice 1 oz, <br> syrups 1 oz desserts that contain <br> high amounts of <br> ingredients rich in <br> copper; candy with <br> nuts, chocolate, or <br> cocoa <br> Beverages, <br> liquids, <br> misc. coffee, tea, fruit <br> juices, fruit- <br> flavored beverages, <br> lemonade, soups <br> made with allowed <br> ingredients Postum ${ }^{\text {TM }}$ and other <br> cereal beverages <br> 1 cup, carbonated <br> beverages 12 oz, <br> ketchup 2 Tbsp, <br> dehydrated and <br> canned soups instant breakfast <br> beverages, mineral <br> water, soy-based <br> beverages, copper- <br> fortified formulas, <br> brewer's yeast, <br> multiple vitamins <br> with copper or <br> minerals |
| :--- |


| Sample Menu |  |  |  |
| :---: | :---: | :---: | :---: |
| Breakfast | Lunch |  | Dinner |
| - grapefruit $1 / 2$ cup <br> - scrambled egg 1 <br> - white toast 1 slice <br> - margarine 1 tsp <br> - skim milk $1 / 2$ cup <br> - coffee 1 cup <br> - salt/pepper | - white slice. <br> - roast lettuc toma mayo Tbsp <br> - carro <br> - fresh <br> - skim cup | bread 2 <br> eef 2 oz <br> naise 1 <br> sticks 6 range 1 ilk $1 / 2$ | - chicken breast 3 $o z$ <br> - rice $1 / 2$ cup <br> - green beans $1 / 2$ cup <br> - margarine 1 tsp <br> - white bread 1 slice <br> - jelly 1 tsp <br> - apple 1 <br> - lemonade 1 cup <br> - salt/pepper |
| This Sample Diet Provides the Following |  |  |  |
| Calories | 1520 | Sodium | 1500 mg |
| Protein | 69 gm | Potassium | 2150 mg |
| Carbohydrates | 191 gm | Copper | 0.68 mg |
| Fat | 54 gm |  |  |

