Low Microbial Diet

Chemotherapy, radiation, or bone marrow transplant patients are at a higher risk of developing a food-related infection due to decreased immune function. These guidelines will help you avoid foods that are more likely to contain harmful bacteria.

Basic Guidelines for Immunosuppressed Patients:

- Wash hands often.
- Wash utensils and cutting boards after each use.
- Throw away any food with mold (cutting the mold off will not remove harmful organisms).
- Do not eat food after the expiration date on the label.
- Keep raw meat and ready-to-eat foods separate.
- Keep cold foods cold, hot foods hot, and refrigerate leftovers immediately.
  - Refrigerator should be 34 - 40°F, freezer 0°F or colder.
- Do not eat foods from restaurants, fast food, buffets, or delis. Do not eat food samples from grocery stores.
- Talk with your Dietitian about safe food selection and handling.

This diet should be followed during treatment for bone marrow transplant as indicated by your Doctor. Your Doctor or Dietitian will tell you when this diet is no longer needed based on the following recommendations:

- **Autologous (self) transplant patients** undergoing chemotherapy treatment only should follow this diet during the first three months after treatment.
- **Allogenic (donor) transplant patients** should follow this diet until off of all immunosuppressive therapy (e.g. cyclosporine, prednisone, tacrolimus, or Cellcept®).
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<tr>
<th>Food Groups</th>
<th>Allowed</th>
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| **Dairy**   | • All pasteurized grade “A” milk and milk products, such as yogurt, eggnog, ice cream, frozen yogurt, sherbet, ice cream bars, milkshakes, processed cheese slices and spreads, cream cheese, cottage cheese, and ricotta cheese  
• Commercially-packaged and pasteurized hard, semi-soft, and soft cheese, such as cheddar, mozzarella, parmesan, Monterey Jack, Swiss, brie, and camembert.  
• Cooked unpasteurized soft cheeses, such as brie, camembert, feta, farmer’s cheese*  
• Cheese products, such as Cheez Whiz®, canned nacho cheese  
• Dry, refrigerated, or frozen pasteurized whipped topping  

*Though not completely risk free, the risk of contracting a food borne illness from COOKED UNPASTEURIZED soft cheeses is low. | • Unpasteurized or raw milk and milk products  
• Cheeses from the deli  
• Cheeses containing chili peppers or any uncooked vegetables  
• Cheeses with molds, such as bleu, Stilton, Roquefort, gorgonzola  
• Mexican-style soft cheese, such as queso fresco, queso blanco  
• Uncooked unpasteurized soft cheese, such as brie, camembert, feta, farmer’s cheese |
| **Meat and Meat Substitute** | • All meats cooked to well-done or canned meats (beef, pork, lamb, poultry, fish, shellfish, game, ham, bacon, sausage)  
• Well-cooked eggs (firm egg white and yolk)  
• Pasteurized egg substitutes, such as Egg Beaters®, and powdered egg whites (can be used uncooked)  
• Commercially-packaged salami, bologna, hot dogs, ham, and other luncheon meats that have been heated until steaming  
• Canned and commercially-packaged smoked fish (refrigerate after opening)  
• Refrigerated smoked seafood, such as salmon or trout (if cooked to 145°F)  
• Pasteurized or cooked tofu*  

*Commercially-packaged pasteurized tofu does not need to be boiled. All unpasteurized tofu must be cut into 1-inch cubes or smaller, and boiled a minimum of five minutes in water or broth before eating or using in recipes. | • Raw or undercooked meat, poultry, fish, game, tofu  
• Raw or undercooked eggs and unpasteurized egg substitutes  
• Eggs over-easy, soft-boiled eggs, or poached eggs  
• Meats and cold cuts from the deli  
• Commercially-packaged salami, bologna, hot dogs, ham, and other luncheon meats that have not been heated until steaming  
• Hard-cured salami in natural wrap  
• Uncooked refrigerated smoked seafood, such as salmon or trout labeled as “nove-style”, “lox”, “kippered”, “smoked”, or “jerky”  
• Pickled fish  
• Tempeh products |
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| **Bread, Grain, and Cereal Products** | • All breads, bagels, rolls, muffins, English muffins, pancakes, sweet rolls, waffles, French toast  
• Potato chips, corn chips, tortilla chips, pretzels, popcorn  
• Cooked pasta, rice, and other grains  
• All cereals, cooked and ready-to-eat | • Uncooked grain products, such as raw oats |
| **Fruit**                          | • Well-washed* raw fruit  
• Cooked, canned, and frozen fruit  
• Dried fruit  
• Pasteurized fruit juices and frozen juice concentrates | • Unwashed raw fruit  
• Unpasteurized fruit juice  
• Unpasteurized items containing raw fruit found in the grocery refrigerator case |
| *Wash fresh fruits thoroughly under running water just before eating, cutting or cooking. **We do not recommend washing fruits with soap, detergent, or commercial produce washes.** |
| **Vegetables**                     | • Well-washed* raw vegetables  
• All cooked, frozen, or canned vegetables and potatoes  
• Pasteurized vegetable juices  
• Shelf-stable bottled salsa (refrigerate after opening)  
• Cooked vegetable sprouts, such as mung bean, alfalfa, clover | • Unwashed raw vegetables  
• Salads from the deli  
• Fresh, unpasteurized salsa  
• Raw vegetable sprouts  
• Unpasteurized vegetable juice  
• Unpasteurized items containing raw vegetables found in the grocery refrigerator case |
<p>| *Wash fresh vegetables thoroughly under running water just before eating, cutting or cooking. <strong>We do not recommend washing vegetables with soap, detergent, or using commercial produce washes.</strong> |</p>
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<td><strong>Nuts</strong></td>
<td>• Canned or packaged roasted nuts, not in the shell</td>
<td>• Unroasted raw nuts</td>
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<td>• Nuts in baked products</td>
<td>• Roasted nuts in the shell</td>
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<td>• Commercially-packaged nut butters, such as peanut, almond, soybean</td>
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<td><strong>Fats</strong></td>
<td>• Vegetable oil and shortening</td>
<td>• Fresh salad dressings</td>
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<td>• Refrigerated lard, margarine, butter</td>
<td>containing raw eggs or unsafe</td>
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<td>• Commercial, shelf-stable* mayonnaise and salad dressings</td>
<td>cheeses, such as Hollandaise</td>
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<td>• Cooked gravy and sauces</td>
<td>sauce</td>
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<td>*Shelf-stable refers to unopened canned, bottled, or packaged food</td>
<td>• Homemade mayonnaise</td>
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<td>products that can be stored, before opening, at room temperature. Follow</td>
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<td>container guidelines after opening.</td>
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<td><strong>Desserts</strong></td>
<td>• Refrigerated commercial and homemade cakes, pies, pastries, and pudding</td>
<td>• Unrefrigerated, perishable</td>
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<td>• Refrigerated cream-filled pastries</td>
<td>cream-filled pastry products</td>
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<td></td>
<td>• Homemade and commercial cookies</td>
<td>• Raw cookie dough or cake</td>
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<td>• Shelf-stable cream-filled cupcakes, such as Twinkies®, Ding Dongs®</td>
<td>batter</td>
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<td>• Shelf-stable fruit pies, such as Pop-tarts®, Hostess® fruit pies</td>
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<td>• Flavored ices, popsicle-like products</td>
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<td>• Candy, gum</td>
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| Beverages   | • Pasteurized fruit and vegetable juices  
              • City water supply or ice made from city water*  
              • Commercial bottled waters*  
              • Boiled well water*  
              • All canned, bottled, and powdered beverages  
              • Instant and brewed coffee and tea  
              • Cold-brewed tea made with boiling water  
              • Herbal teas brewed using commercially-packaged tea bags  
              • Commercial nutrition supplements (liquid and powder), such as Carnation Breakfast Essentials®, Ensure®, Boost®, Slim Fast®, or store brand equivalents  
              • Commercially-sterile ready-to-feed and liquid-concentrate infant formulas (avoid powdered infant formulas if a ready-to-feed or liquid-concentrate alternative is available)  
              *Refer to “Water Safety Guidelines” for additional information. | • Unboiled well water*  
              • Cold-brewed teas made with warm or cold water, such as sun tea  
              • Unpasteurized fruit and vegetable juices  
              • Maté tea  
              • Wine  
              • Unpasteurized beer (Talk with your Doctor before consuming any alcoholic beverage) |
| Others      | • Granulated sugar, brown sugar, powdered sugar  
              • Jam, jelly, syrups (refrigerate after opening)  
              • Black pepper added before or during cooking  
              • Commercially-packaged pasteurized Grade A honey  
              • Catsup, mustard, BBQ sauce, soy sauce, other condiments (refrigerate after opening)  
              • Bottled or canned pickles, pickle relish, olives (refrigerate after opening)  
              • Commercially-packaged frozen entrees, such as pizza, raviolis, lasagna  
              • Vinegar  
              • Well-washed fresh herbs  
              • Commercially-dried herbs and spices | • Raw, unpasteurized honey or honey in a comb*  
              • Herbal and nutrient supplements not approved by your Doctor or Dietitian  
              • Brewers yeast, if uncooked  
              • Deli entrees, such as pizza, macaroni and cheese  
              • Black pepper added after food has been cooked  
              • All miso products  
              • Unwashed fresh herbs  
              *Honey products are not allowed for any child less than one year old and not allowed for children with SCIDS until 9 months after transplant. |