



Preparing to Receive I-131: The Low-Iodine Diet

NOTE: This information is prepared specifically for patients taking part in clinical research at the NIH Clinical Center. It does not necessarily apply to patients elsewhere. If you have questions about this information, ask a member of your health care team.

Why do I need to follow a low-iodine diet?

Because you are scheduled to receive radioactive iodine (I-131), you will be asked to follow a diet low in iodine. You will need to stay on this diet for about 2 weeks before getting either a tracer or a therapy dose of I-131. Limiting iodine in your diet will deplete the iodine stores in your body. When you get radioactive iodine, your thyroid will be “hungry” for iodine and will absorb more I-131.

What is iodine? How much iodine do Americans usually consume?

Iodine is an essential mineral your body uses to make thyroid hormones. You need iodine only in very small amounts. The usual daily intake in the United States is about 150 to 550 micrograms. The Recommended Daily Allowance (RDA) for iodine for adults is 150 micrograms a day.

How much iodine can I consume on a low iodine diet?

A low-iodine diet strictly limits foods rich in iodine. On this diet, your iodine intake will be less than 50 to 100 micrograms per day.

What foods contain a lot of iodine?

Many things affect how much iodine is in foods. Naturally-occurring iodine in the oceans gives seafood its high levels. Dairy products are high in iodine because of processing and cleaning agents. Some breads are made with iodate dough conditioners. Meat, poultry, and eggs contain varying amounts of iodine due to feeds and natural plant foods, and the possible use of iodine-containing drugs and cleansers. The iodine in fruits, vegetables, and grains varies with local soils, irrigation water, fertilizers, and processing.

Major dietary sources of iodine include:

- iodized salt
- milk and dairy products
- breads containing iodate dough conditioners
- supplements (like vitamins) containing iodine.
- foods containing iodized salt
- seafood
- a red food dye (FD and C Red #3)

A teaspoon of iodized salt contains 400 micrograms of iodine. *Since non-iodized salt contains no iodine, it may be used freely on this diet.*

Foods that usually contain little if any iodine include: most vegetables (except potatoes and some types of beans), fruits, most beverages (except milk), and plain fats and oils.

What foods can I eat while I am on this diet?

Refer to the table included with this information showing foods allowed and not allowed. The sample menus after this list can give you meal-planning ideas.

What about foods not listed in the table?

The iodine content of many foods is just not known. We recommend that if a food is not included in the table, do not eat it while you are on the low-iodine diet.

Don't processed foods contain salt?

Yes, but national food manufacturers and processors usually use non-iodized salt, not iodized salt. If iodized salt has been used, the product's ingredient label must, by law, state this. However, not all food companies follow this rule, especially small, local companies. We recommend not eating foods from local bakeries, farmers' markets, and other small, local food preparers unless you are sure that only "allowed" ingredients have been used.

Check food labels for any of the iodine-containing additives listed below. Do not eat foods containing any of the following:

- iodized salt
- sea salt
- iodine, iodate, iodide
- alginate, algin, agar, carrageenan, nori
- Red Dye #3.

What about vitamin and other supplements?

Check the labels on all products you use. If the label lists iodine, do not take the supplement while on this diet. Also, avoid any supplements containing seaweed or kelp.

What else should I know about this diet?

1. Avoid food from restaurants, fast-food chains, and carry-outs.
2. Non-iodized salt and seasonings listed on the "Allowed Foods" list may be used freely.
3. Foods containing very small amounts of milk and eggs may be used, but these items should not be listed as one of the first three ingredients on a product's label.
4. Red Dye #3 is sometimes used to color red or pink medications and multivitamins, so read labels carefully. But talk to your doctor before discontinuing any medications. Red Dye #40 is allowed on the low iodine diet.

Low-Iodine Diet Guidelines

Note: Starches (breads, grains, and cereals) as well as meat and poultry contain moderate amounts of iodine and should be eaten in limited quantities only.

- **Limit starches (bread, grains, cereals) to four servings a day.**
- **Limit meat and poultry to 5 ounces a day**
- **Check ingredient labels on all foods.**
- **Avoid any foods using iodized salt and other iodine-containing additives.**

<i>Food Groups</i>	<i>Servings/Day</i>	<i>Foods Allowed</i>	<i>Foods Not Allowed</i>
<i>Starches: breads, grains, cereals</i>	Limit to 4 servings per day. 1 serving = 1 slice bread 1 oz bread product 1/2 cup pasta 1 cup cereal	Commercial breads and rolls that do not contain iodate dough conditioners. (Check labels.) Homemade breads made only with “allowed” ingredients. English muffins, doughnuts, bagels, pretzels, crackers. Pasta: macaroni, noodles, spaghetti. Cold or hot cereals not containing Red Dye #3. Allowed cereals include: Cream of Wheat, oatmeal, shredded wheat, Rice Krispies, Cheerios,	Breads containing iodate dough conditioners (calcium iodate or potassium iodate). Check labels. Muffins, French toast, pancakes, corn bread, tortillas. Rice. Cereals containing Red Dye #3, or other not-allowed ingredients. Grits.
	Not limited	Potato chips, corn chips, plain popcorn.	

<i>Food Groups</i>	<i>Servings/Day</i>	<i>Foods Allowed</i>	<i>Foods Not Allowed</i>
<i>Meat, poultry</i>	Limit to 5 ounces per day.	Plain beef, pork, lamb, veal, chicken, ham, bacon, hot dogs.	Turkey. Liver and other organ meats. Casseroles, stews, meat-loaf, chili, chow mein. Frozen dinners. Soy products (tofu, veggie burgers).
<i>Fish and seafood</i>	0	None	All seafood: shellfish, fish, fish sticks, tuna, caviar, seafood soups and chowders. Kelp, algae, seaweed.
<i>Eggs</i>	As desired.	Egg whites, egg substitutes made from egg whites. (Whole eggs are allowed as an ingredient only in very small amounts.)	Egg yolks, whole eggs.
<i>Milk and dairy products</i>	0 Limit to 1 ounce per day.	None. Liquid and powdered nondairy creamers may be used as milk or cream substitutes if they do not contain carrageenan. Cheese	All milk (whole, low-fat, skim, dry powder, buttermilk, chocolate flavored, soy milk). Cream (whipped and half & half). Dairy desserts, yogurt. Hot chocolate, egg nog, milkshakes, <i>frappés</i> . Cheese and dishes made with cheese (pizza, macaroni and cheese, lasagna). Cottage cheese.

<i>Food Groups</i>	<i>Servings/Day</i>	<i>Foods Allowed</i>	<i>Foods Not Allowed</i>
<i>Vegetables</i>	As desired.	Raw, fresh-cooked, canned, or frozen with-out added iodized salt, except those listed as “not allowed.”	<p>Creamed vegetables, rhubarb.</p> <p>Potatoes: with skin, instant, scalloped, French fries, fried onion rings.</p> <p>Beans: pinto, lima, navy, kidney, red, cowpeas.</p> <p>Chili.</p> <p>Soy products: tofu, veggie burgers, etc.</p>
<i>Nuts</i>	As desired.	Peanuts, walnuts, pecans peanut butter.	
<i>Fruits and juices</i>	As desired.	All except those listed as “not allowed.”	Fruit cocktail, maraschino cherries if they contain Red Dye #3.
<i>Beverages</i>	As desired.	<p>Cola, diet cola, lemonade, lemon-lime sodas, coffee, tea.</p> <p>Beer, wine, alcohol as allowed by your doctor.</p>	<p>Red or pink drinks if they contain Red Dye #3.</p> <p>Milk and beverages containing milk.</p>
<i>Fats</i>	As desired.	<p>Margarine, butter, vegetable oils, mayonnaise, Italian dressing, oil-and-vinegar dressing</p> <p>Gravies made from “allowed” items (<i>au jus</i> or brown from mix).</p>	<p>Salad dressings made from ingredients on “Not Allowed” list (buttermilk, ranch dressing).</p> <p>Gravies made from milk or cream.</p>
<i>Soups</i>	As desired.	<p>Broth-based soups like chicken noodle, vegetable beef.</p> <p>Homemade items on “Allowed” list.</p>	Soups made with milk or cream.

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<i>Desserts, sweets</i>	As desired.	Jell-O, fruit ice, Popsicles, gum drops, hard candy (except if containing Red Dye #3.) Marshmallows. Any homemade items from items on “Allowed” list (such as fruit salads, fruit sorbets).	Frozen dairy desserts (ice cream, frozen yogurt, sherbet). Puddings, custards. Milk chocolate candy, caramels. Cakes, cookies, pies.
<i>Miscellaneous (condiments, sweets, food additives, preservatives)</i>	As desired.	Seasonings: non-iodized salt , onion, garlic, black pepper, fresh or dried herbs, lemon or lime juice. Soy sauce (very small amounts only). Catsup, mustard, salsa. Sugar, sugar substitute, honey, maple syrup. Jelly.	iodized salt , seasoning salts, sea salt. Special dietary products like Ensure, Slimfast, Boost (liquids, powders, bars, etc.). Sulfured molasses, pancake syrup. Any food or beverage containing any of the following ingredients: Alginate, algin, agar-agar, carrageenan, nori (additives made from seaweed). Red Dye #3. Iodine, iodates or iodides.

These menu plans show how you may include “allowed” foods in a typical day while you are on this diet. They are only examples—you do not need to follow these menus.

<p><i>Day 1</i></p> <p><i>Breakfast</i> orange juice cream of wheat or oatmeal margarine and/or sugar scrambled egg whites 2 strips bacon coffee with nondairy creamer sugar</p>
<p><i>Lunch</i> roast chicken sandwich • two slices of bread • 2 ounces sliced chicken • lettuce, tomato • mayonnaise salad with Italian dressing fresh grapes lemonade, tea, or juice</p>
<p><i>Dinner</i> 2 ounces roast beef plain baked potato (no skin) mixed vegetables dinner roll margarine fresh strawberries iced tea with lemon and sugar</p>

<p><i>Day 2</i></p> <p><i>Breakfast</i> grapefruit juice plain Cheerios nondairy creamer for cereal banana coffee nondairy creamer sugar</p>
<p><i>Lunch</i> chicken noodle soup peanut butter and jelly sandwich carrot/celery sticks fresh apple Jell-O cola or tea sugar, lemon</p>
<p><i>Dinner</i> 5 ounces broiled chicken baked sweet potato broccoli bread margarine lemon sorbet juice or tea</p>

<p><i>Remember</i></p> <ul style="list-style-type: none">• Check ingredients labels on all foods.• Avoid any foods using iodized salt or additives containing iodine.
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This information is prepared specifically for patients participating in clinical research at the Warren Grant Magnuson Clinical Center at the National Institutes of Health and is not necessarily applicable to individuals who are patients elsewhere. If you have questions about the information presented here, talk to a member of your healthcare team.

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