



Patient & Family Guide
2022

Nutrition Guidelines for a Chyle Leak



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Nutrition Guidelines for a Chyle Leak

- Chyle is a fluid that flows through your lymph vessels. Lymph vessels run through your body beside your blood vessels.
- Your body uses fat from the food you eat to make chyle. Your body makes about 3 litres of chyle per day. Chyle contains fat, as well as protein, electrolytes, white blood cells, and vitamins.
- When chyle leaks from your lymph vessels, your body loses energy, protein, and vitamins. This can affect your immune system.
- Chyle may collect in your chest or abdominal (stomach area) cavities after surgery.
- Treatment for a chyle leak may include:
 - › Following fat-free nutrition guidelines
 - › Medication
 - › Drainage

Fat-free nutrition guidelines

- Eating fat-free foods can help close a chyle leak.

Fat-free = 0.5 grams of fat or less per serving

- Eating fat-free foods helps reduce the flow of chyle, so that the hole in the lymph vessel can close. You may need tube feeding into your stomach or bowel using a special formula. Sometimes, TPN (total parenteral nutrition) is given through a special catheter (tube) into a large vein.
- This pamphlet lists fat-free nutrition guidelines that give you enough protein for healing and meet your essential fatty acid needs.
- Medium chain triglyceride (MCT) oil may be used for added calories. **Talk to your dietitian or primary health care provider before taking MCT oil.**
- A daily multivitamin with minerals may be taken to make sure all your nutritional needs are met.

Best choices	Avoid
<p>Vegetables and fruit</p> <ul style="list-style-type: none"> • All fresh, frozen, and canned fruits and vegetables, except those listed under ‘Avoid’ • Fruit and vegetable juices • Dried fruit • Jams, jellies, fruit spreads • Tomato paste, fat-free tomato sauces 	<ul style="list-style-type: none"> • Any fruit or vegetables that have been fried or prepared with butter, cheese, or cream sauces • Vegetables canned in oil • Avocados • Olives • Coconut • Canned fruit pie fillings

Best choices	Avoid
<p>Grain products</p> <ul style="list-style-type: none"> • Breads with less than 1 gram of fat per serving • Cereals like oatmeal, Cream of Wheat®, and dry cereals without nuts or coconut • Fat-free crackers and rice cakes • Fat-free pasta and steamed rice • Fat-free, air-popped popcorn • Pretzels 	<ul style="list-style-type: none"> • Breads with more than 1 gram of fat per serving • Muffins, scones, doughnuts, tea biscuits, cheese bread • Pancakes, waffles • Cereals with nuts or coconut • Egg noodles, ramen noodles • Fried rice

Best choices	Avoid
<p>Milk and alternatives</p> <ul style="list-style-type: none"> <li>• Fat-free (skim or non-fat) dairy products, including milk, cheese, sour cream, cottage cheese, yogurt, frozen yogurt, eggnog <li>• Fat-free pudding <li>• Fat-free soy milk <li>• Skim milk powder 	<ul style="list-style-type: none"> <li>• Whole or 2% milk <li>• Regular soy milk <li>• Regular yogurt, ice cream, sour cream, cottage cheese, cream cheese <li>• Regular and full-fat cheese products with 20% milk fat (MF) or more <li>• Whipping cream, half and half cream <li>• Rice, almond, and coconut milk <li>• Regular eggnog

Best choices	Avoid
<p>Meat and alternatives</p> <ul style="list-style-type: none"> • White fish (with 1.5 grams of fat or less per 3 oz serving), 1 to 2 servings per day (like cod, haddock, pollock, sole, or light tuna in water) • Low-fat tofu (if label says 1.5 grams of fat per 1/2 cup serving or less) • Fat-free luncheon meat • Fat-free veggie burgers • Egg whites, fat-free egg substitutes • Beans or pulses canned in water, fat-free refried beans 	<ul style="list-style-type: none"> • Meat and poultry (chicken, turkey, etc.) • Organ meats • Corned beef • Fish canned in oil • Nuts, nut butters • Beans or pulses canned with fat (like pork and beans) • Whole eggs, egg yolks • Edamame or soybeans

Best choices	Avoid
<p>Fats and oils</p> <ul style="list-style-type: none"> • Fat-free salad dressings, mayonnaise, and sauces • Fat-free creamers • Fat-free Cool Whip® • Fat-free sour cream 	<ul style="list-style-type: none"> • Butter, margarine, oil, lard, shortening • Regular salad dressings and regular mayonnaise • Sauces, gravies • Coconut, coconut butter and oil

Best choices	Avoid
<p>Others</p> <ul style="list-style-type: none"> • Angel food cake • Jelly and gummy candies, marshmallows • Licorice, hard mints, chewing gum • Fat-free animal crackers and fat-free cookies • Jell-O® • Popsicles, fat-free frozen juice bars • Sherbet, sorbet • Ketchup, mustard, relish, pickles, barbecue sauce, soy sauce, hot sauce • Jams, jellies, syrup • Fat-free salsa • Vinegars, herbs, spices • Fat-free broth • Fat-free soups 	<ul style="list-style-type: none"> • Soups made with whole milk or cream • Candies with butter, coconut, chocolate, cream, and caramel • Snack foods (like potato chips, Hawkins Cheezies®) • Cakes, cookies, pies • Most desserts

Best choices	Avoid
<p>Nutritional supplements</p> <ul style="list-style-type: none"> <li>• Boost® Fruit flavoured beverage <li>• Ensure® Clear nutrition drink <li>• Fat-free protein supplements like: <ul style="list-style-type: none"> <li>› Skim milk powder <li>› Beneprotein® Instant Protein Powder <li>› Boost® Just Protein <li>› ProSource® liquid protein 	<ul style="list-style-type: none"> <li>• Liquid nutritional drinks that are not clear, like: <ul style="list-style-type: none"> <li>› Ensure®: Original, Plus, Protein Max, High Protein, or Compact <li>› Boost®: Original, Plus Calories, Diabetic, High Protein

Tips:

- **Try eating 6 to 8 small meals or snacks** a day, instead of 3 large meals. Avoid eating too much at once.
- **Read food labels** to help choose fat-free foods. Fat-free foods have 0.5 grams of fat or less per serving.

- **Calories:** Avoiding fats makes it harder to get the calories you need. Weigh yourself 2 times a week and see your primary health care provider or dietitian if weight loss is a concern.
- **Protein:** Be sure to eat enough protein. Eat 110 to 130 grams of fat-free protein a day.* For example:

Food	Grams (g) of protein
60 ml (1/4 cup) Egg Beaters®	6 g
2 egg whites, cooked	7 g
28 g fat-free luncheon meat	6 g
250 ml (1 cup) fat-free milk	8 g
45 ml fat-free dry milk powder	10 g
125 ml (1/2 cup) fat-free cottage cheese	13 g
188 ml fat-free Greek yogurt	15 to 18 g
1 scoop Beneprotein® Instant Protein Powder	6 g
Boost® Fruit flavoured beverage	8.8 g
75 grams (2½ oz) cooked fish	20 g

***Tell your dietitian if you are being followed by a kidney specialist. You may need to eat smaller amounts of protein.**

- **Use fat-free cooking methods**, like baking, roasting or broiling on a rack, poaching, and steaming. Avoid foods that have been fried.
- **Medium chain triglyceride (MCT) oil** is a special kind of fat that can be used as part of a fat-free eating plan. It provides fat calories that have little effect on chyle production. **It is not a source of EFA.** Ask your dietitian for the pamphlet, “*Medium Chain Triglycerides (MCT) in Your Diet*”.
 - › www.nshealth.ca/sites/nshealth.ca/files/patientinformation/0354.pdf
- **Essential Fatty Acids (EFA)** are needed for your body to work well. After following fat-free eating guidelines for 7 to 14 days (1 to 2 weeks), ask your dietitian about slowly adding back oils with EFA. These include sunflower, flaxseed, walnut, soybean, and corn oil. Sunflower and flaxseed oils are the best sources of EFA.
 - › Start by adding 1/2 to 1 tsp (3 to 5 ml) a day of any of these oils. Do this for 7 days (1 week).
 - › Slowly increase to 2 to 3 tsp (10 to 15 ml) a day.
- **Supplements:** While eating fat-free, taking a daily multivitamin with minerals will help you meet your nutritional needs.

Meal ideas

Breakfast

- Fat-free cereals like Kellogg's® Rice Krispies®, corn flakes, Kellogg's® Corn Pops®, or Special K® with skim milk or fat-free soy milk
- Add fruit to cereal
- Toast fat-free bread and add jam or jelly
- Add fruit to fat-free yogurt
- Egg white omelet with fat-free ham and/or chopped onions, mushrooms, peppers, or tomatoes made in a non-stick pan
- MCT French Toast (see MCT pamphlet)
- Fat-free smoothie
 - › 1 cup (250 ml) fresh or frozen fruit
 - › 1 banana
 - › 1/2 cup (125 ml) fat-free yogurt or sorbet
 - › 1/2 cup (125 ml) skim milk, fat-free soy milk, or juice
 - › Optional:
Sweeten with honey or sugar as needed.
Try adding fat-free protein powder to boost protein intake.
Add flavour with cinnamon, ginger, or vanilla.
- Tea or coffee (with sugar or sweetener and/or skim milk)

- Skim milk, fat-free soy milk, fruit juice, water

Lunch ideas

- Sandwich with fat-free luncheon meat, fat-free bread, lettuce, tomatoes, or cucumbers, fat-free or MCT mayo (see MCT pamphlet), fat-free mustard
- Salad with fat-free or MCT dressing (see MCT pamphlet)
 - › Add a variety of vegetables.
 - › Add 1/2 cup of beans or chickpeas for extra protein.
 - › Add berries, fruit, or dried fruit for variety.
- Try a fat-free nutritional drink (see Best choices on page 9) or other fat-free drink

Dinner ideas

- 3 to 6 oz of baked, broiled, or steamed white fish or MCT baked fish (see MCT pamphlet)
- Tuna casserole with light tuna in water, fat-free pasta, and MCT white sauce (see MCT pamphlet)
- Stir-fry made in a non-stick pan with 1/2 cup low-fat (1½ grams of fat or less per serving) tofu per serving, a variety of vegetables, and fat-free broth or apple juice. Season to taste with a fat-free sauce, like soy or sriracha (hot sauce), and/or herbs and spices.

- Baked or boiled potato or sweet potato
- Plain rice, noodles
- Try MCT brown sauce (see MCT pamphlet) on potatoes, rice, or noodles
- Fresh, steamed, or boiled vegetables

**What are your questions?
Please ask. We are here to help you.**

Dietitian: _____

Phone: _____

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Learn about other programs and services in your community: call 211 or visit <http://ns.211.ca>

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The information in this pamphlet is to be updated every 3 years or as needed.