



Patient & Family Guide
2022

Flax



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Flax

What is flax?

Flax is a gluten-free grain with a mild nutty flavour. Flax has many health benefits.

- It is a source of ALA (alpha-linolenic acid).
 - › ALA is the plant form of omega-3, a healthy fat that may help protect you from heart disease and stroke by lowering cholesterol in the blood.
- It is an excellent source of lignan, an important plant compound.
 - › Lignans may help lower the inflammation (swelling) caused by autoimmune diseases.
- Flax has both soluble and insoluble fibre.
 - › Soluble fibre slows down digestion by forming a gel. This may help lower blood sugar and cholesterol levels. It may also help you feel full longer.
 - › Insoluble fibre goes through your body without being digested. This can help you have more regular bowel movements (poops).

What are your questions?

Please ask. We are here to help you.

Flax comes in 3 forms:

1. **Whole** brown or yellow seeds. These seeds are a little bigger than sesame seeds. They have insoluble fibre. Your body cannot take in ALA, lignans, or soluble fibre from whole seeds.
2. **Ground** flax, sometimes called flax flour. This form has the most benefits, since your body can take in all of the nutrients. You can buy pre-ground seeds, or grind your own in a coffee grinder.
3. Flax **oil** has the most ALA, but does not have fibre or lignans. **You cannot use flax oil for cooking.** Flax oil also comes in capsules. Only buy flax oil in small, dark bottles. Check the expiration date, as the oil can go bad quickly. You must keep flax oil in the fridge. **Do not have more than 1 tsp (5 ml) per day.** Talk with your primary health care provider before taking flax oil.

Note: Do not eat raw or unripe flaxseed. It may have toxic compounds (poison).

How do I use flax?

- Sprinkle ground flax on hot or cold cereal, yogurt, or applesauce.
- Add ground flax to hamburgers, soups, or casseroles.
- Replace 1 tbsp of fat in a recipe with 3 tbsp of ground flax.
- Replace 1 egg in a baked recipe with a mixture of 1 tbsp ground flax and 3 tbsp water.
- Add flax to muffin, bread, or loaf recipes, and to breadcrumb mixes.
- Use small amounts of flax oil in salad dressings, milkshakes, and smoothies.

How much should I use?

- Start with a small amount, like 1 tsp of ground flax. Take more over time to let your body get used to the extra fibre.
- Use up to 5 tsp of ground flax per day or 1 tsp of flax oil per day. **Do not have more than 1 tsp of flax oil per day.**

Note: Be sure to drink enough water or other fluids when adding flax.

How do I store flax?

- **Whole** flaxseed can be stored at room temperature in a clean, dry place for up to 1 year.
 - › To keep it fresh, grind flaxseed as needed and store in an opaque (not see-through), airtight container in the fridge or freezer for up to 30 days (1 month).
- **Ground** flax should be bought in a vacuum-sealed package. Store it in the fridge for up to 90 days (3 months).
- **Oils and capsules** should be stored in the fridge after opening. Use within 6 weeks (1 1/2 months) after opening.

Nutrient information:

Form	Whole seeds	Ground flax	Flax oil
Amount	1 tbsp	1 tbsp	1 tbsp
Energy	59 calories	36 calories	124 calories
Total fat (in grams)	4.5 g	3.3 g	14 g
Omega-3 (in grams)	2.5 g	1.8 g	8 g
Fibre (in grams)	3 g	2.2 g	0 g

For more information:

Flax Council of Canada

- › www.flaxcouncil.ca
- › Phone: 204-982-2115
- › Email: flax@flaxcouncil.ca

Valley Flaxflour

- › www.flaxflour.com
- › Phone (toll-free): 1-866-825-8256
- › Email: info@flaxflour.com

Saskatchewan Flax Development Commission

- › www.saskflax.com
- › Phone: 306-664-1901
- › Email: saskflax@saskflax.com

Recipes

Apple flax pancakes

- › 1 1/4 cups (300 ml) all-purpose flour
 - › 1/3 cup (80 ml) coarsely (roughly) ground flaxseed
 - › 3 tbsp (45 ml) granulated (white) sugar
 - › 1 tbsp (15 ml) baking powder
 - › 1/2 tsp (2 ml) salt
 - › 1/4 tsp (1 ml) cinnamon
 - › Dash of nutmeg (if you like)
 - › 2 eggs, whites and yolks separated, whites beaten stiffly
 - › 1 1/4 cups (300 ml) 2% milk
 - › 3 tbsp (45 ml) melted non-hydrogenated margarine (such as Becel®)
 - › 1 cup (250 ml) peeled, shredded apple (shred just before adding)
1. In a large bowl, combine flour, ground flaxseed, sugar, baking powder, salt, cinnamon, and nutmeg.
 2. In a medium bowl, lightly beat together egg yolks, milk, and margarine.
 3. Add liquid ingredients to the dry. Stir until just combined.
 4. Shred apple and add it to the batter. Stir until just combined.

5. Fold in egg whites.
6. Preheat griddle or heavy frying pan to medium heat. Lightly grease pan or spray with non-stick vegetable spray.
7. Using a 1/3 cup (75 ml) measure, pour batter into pan.
8. Cook pancakes until bubbles appear on surface, about 1 minute.
9. Turn over and brown the other side.

Oven fried chicken

- › 1 beaten egg
- › 3 tbsp (45 ml) skim milk
- › 1/2 cup (125 ml) ground flaxseed
- › 1/2 cup (125 ml) finely crushed unsalted crackers
- › 1/4 tsp (1 ml) black pepper
- › 1 tbsp (15 ml) dried parsley flakes
- › 1 tsp (5 ml) paprika
- › 1 tsp (5 ml) chili powder
- › 1 tsp (5 ml) garlic powder
- › 1 tsp (5 ml) seasoned salt
- › 2 to 3 pounds (1 to 1.5 kg) chicken pieces
- › 2 tbsp (30 ml) melted non-hydrogenated margarine

Note: For a less spicy version, use less spice.

Note: For a lower fat version, do not add margarine.

1. Preheat oven to 350° F (180° C).
2. In a small bowl, combine beaten egg and milk.
3. In a shallow container, combine ground flaxseed, cracker crumbs, pepper, parsley, paprika, chili, garlic, and seasoned salt.

4. Remove skin from chicken and rinse with water. Pat dry.
5. Dip chicken pieces into egg mixture. Then coat with crumb mixture.
6. Place chicken on a greased 15 x 10 x 3/4 inch (40 x 25 x 2 cm) baking pan so that the pieces do not touch.
7. Drizzle melted margarine over chicken.
8. Bake for 45 minutes or until chicken is tender and no longer pink inside. **Do not turn chicken pieces while baking.**

Meatloaf

- › 2 pounds (1 kg) lean ground beef (or turkey or chicken)
 - › 1 cup (250 ml) skim milk
 - › 1/2 cup (125 ml) ground flaxseed
 - › 1/2 cup (125 ml) dry breadcrumbs
 - › 1/2 cup (125 ml) chopped onion
 - › 1 egg, beaten
 - › 1 tbsp (15 ml) Worcestershire sauce
 - › 1 tsp (5 ml) black pepper
 - › 1 tsp (5 ml) garlic powder
 - › 1 tsp (5 ml) dry mustard
 - › 1/2 tsp (2 ml) celery salt
 - › 1/4 tsp (1 ml) ground thyme
 - › 1/4 cup (50 ml) ketchup
1. Preheat oven to 350^o F (180^o C).
 2. In a large bowl, combine beef, milk, ground flaxseed, breadcrumbs, onion, beaten egg, Worcestershire sauce, pepper, garlic, mustard, celery salt, and thyme. Mix well.
 3. Pat mixture into a 9 x 5 x 3 inch (22 x 13 x 8 cm) loaf pan.
 4. Spread ketchup over top of loaf.
 5. Bake for 60 to 90 minutes (1 to 1 1/2 hours) or until no longer pink inside.

6. Take out of oven and let stand for 5 minutes.
7. Take out of pan, and place on a platter to serve.

Flax oatmeal cookies

- › 1/2 cup (125 ml) brown sugar
 - › 1 egg
 - › 1 egg white
 - › 1/2 tsp (2 ml) vanilla
 - › 1/4 cup (50 ml) juice
 - › 3/4 cup (175 ml) finely ground flaxseed
 - › 1/2 cup (125 ml) all-purpose flour
 - › 1/2 cup (125 ml) quick-cooking oats
 - › 1/4 tsp (1 ml) salt
 - › 1/2 tsp (2 ml) baking powder
 - › 1/2 tsp (2 ml) baking soda
1. Preheat oven to 350⁰ F (180⁰ C).
 2. In a large bowl, beat together sugar, egg, egg white, vanilla, and juice.
 3. In a medium bowl, combine flaxseed, flour, oats, salt, baking powder, and baking soda.
 4. Stir dry ingredients into wet.
 5. Scoop 2 tbsp (30 ml) of dough at a time onto a non-stick baking sheet.
 6. Bake for 10 to 12 minutes.

7. Cool for 1 to 2 minutes on baking sheet.
Remove cookies from baking sheet and finish cooling on a wire rack.

Makes: 12 cookies

Flax banana blueberry loaf

- › 1 1/3 cup (330 ml) all-purpose flour
 - › 2/3 cup (160 ml) finely ground flaxseed
 - › 2 1/2 tsp (12 ml) baking powder
 - › 1/2 tsp (2 ml) salt
 - › 1/3 cup (80 ml) sugar
 - › 1 egg
 - › 2 or 3 ripe bananas, mashed (about 1 cup)
 - › 3/4 cup (180 ml) skim milk
 - › 1 tsp (5 ml) lemon zest (well grated rind)
 - › 3/4 cup (180 ml) frozen unsweetened blueberries
 - › 1/3 cup (80 ml) pecans (if you like)
1. Preheat oven to 350⁰ F (180⁰ C).
 2. In a medium bowl, combine flour, flaxseed, baking powder, and salt.
 3. In a large bowl, beat together sugar and egg until sugar is dissolved (well mixed).
 4. Add in bananas, milk, and lemon zest. Mix well.

5. Add in dry ingredients. Fold until moistened (all of the dry ingredients are wet).
6. Fold in blueberries and pecans.
7. Turn batter into a lightly greased 4.5 x 8.5 inch (11.5 x 21.5 cm) loaf pan.
8. With a spatula or the back of a spoon, spread the batter in the pan.
9. Bake for 60 minutes (1 hour), or until a toothpick stuck in the middle comes out clean.
10. Remove loaf from pan and cool on a wire rack.

