MENU PLANNINGCommon Food Allergen Substitutions



Trust and communication between child care providers and families helps children with food allergies stay safe. Meeting together to discuss a child's special dietary needs upon enrollment or when needed, promotes consistent and clear communication between cooks and/or supervisors and the family. In some cases, families may need to bring in an ingredient or food for their child.

<u>Food Allergy Canada</u> has many educational <u>resources for child care providers</u> to promote safe and nurturing environments for children with food allergies.

What is a Food Allergy?

Food Allergy Canada defines a food allergy as a medical condition where the immune system mistakenly treats something in a particular food (most often, the protein) as dangerous. The body reacts to the food (an allergen) by having an allergic reaction.

The top **10 most common food allergens** as identified by <u>Health Canada</u> include:

- Eggs
- Milk
- Mustard
- Peanuts
- Soy
- Wheat
- Sesame
- **Shellfish** (e.g., shrimp, crab, lobster, mussels)
- **Fish** (e.g., cod, halibut, salmon, tilapia, trout, tuna)
- Tree nuts (e.g., walnuts, almonds, hazelnuts, cashews)

To promote an inclusive environment, it is recommended that when substitutions are offered for special dietary reasons, they resemble the foods offered to the other children as much as possible. Substitutions need to be documented.



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Ingredient Substitutions

One of the strategies for managing allergies in child care settings is to make ingredient substitutions within a recipe. The following pages provide substitutions for eggs, milk, soy, wheat, and gluten.

Egg Substitutes

For moisture (per egg)

- ¼ cup (60 mL) applesauce, smooth and creamy pumpkin purée, sweet potato purée or other fruit purées
- ¼ cup (60 mL) silken tofu, puréed
- ¼ cup (60 mL) vegetable oil, milk or plain yogurt

As a binder (per egg)

- ¼ cup (60 mL) banana or avocado, mashed (approximately ½ medium fruit)
- 3 Tbsp (45 mL) smooth nut-free butter (e.g., soy butter, sunflower butter)
- ¼ cup (60 mL) potato or sweet potato, mashed (for savoury recipes like meatballs and meatloaf)
- 2 Tbsp (30 mL) cornstarch + 3 Tbsp (45 mL) water or pureed tofu (for savoury recipes)
- 1 Tbsp (15 mL) ground flax seed or chia seed + 3 Tbsp (45 mL) warm water (mix well and allow to gel for 15 minutes before adding to the recipe)

As a leavening agent (per egg)

- $1\frac{1}{2}$ Tbsp (22 mL) vegetable oil + $1\frac{1}{2}$ Tbsp water (22 mL) + 1 tsp (5 mL) baking powder
- 1 Tbsp (15 mL) apple cider vinegar + 1 tsp (5 mL) baking soda (add vinegar to wet ingredients and baking soda to dry ingredients, combining at the end)
- ¼ cup (60 mL) fruit purée + increase both baking powder and baking soda by 25%

Scrambled egg/Omelette/Frittata/Quiche

- Tofu scramble
- Silken tofu omelette/frittata/quiche



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Milk Substitutes

For beverages

Other animal's milk (e.g., goat, sheep) are NOT safe alternatives for children allergic to cow's milk.

- For infants and young toddlers under 2 years of age, follow instructions from parents.
- Fortified soy beverage can be offered to children over 2 years of age.

For baked goods

Buttermilk

 1 Tbsp (15 mL) vinegar or lemon juice + 1 cup (250 mL) soy beverage (stir and let it sit for 5 minutes)

Yogurt (for moisture)

· Silken tofu, puréed

Butter

- Dairy-free, non-hydrogenated margarine
- · Vegetable oils

For snacks

Yogurt

- Soy yogurt
- 1 cup (250 mL) silken tofu, puréed + 2 Tbsp (30 mL) lemon juice + fruit or vanilla extract for added taste, as desired

Cheese

• Plant-based/vegan cheese (e.g., from soy)





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Soy Substitutes

For beverages

- For infants and young toddlers under 2 years of age, follow instructions from the parents.
- Cow's milk (if tolerated), or fortified plant-based beverages (other than soy beverage) can be offered to children over 2 years of age.

Gluten and Wheat Substitutes

Wheat and Gluten Allergy

Is a wheat allergy the same as celiac disease?

No. With a **wheat allergy**, a person's immune system reacts to the proteins in wheat. A wheat allergy does not cause any permanent damage to the intestines.

In **celiac disease**, a specific protein in wheat called gluten damages the small intestine. Because of this damage, the body is less able to absorb many important nutrients. Gluten is found in wheat and also other grains, such as rye, triticale and barley. The symptoms of celiac disease include: chronic diarrhea, weight loss, cramps, bloating, fatigue and anemia.

Wheat and gluten are two different allergens.

For baked goods

Wheat-free flour may not rise as much in baked goods, so recipes may need to be cooked longer at a lower oven temperature (around 25°F less). Adding ½ tsp (2 mL) of baking powder per cup (250 mL) of substitute flour or an extra egg in the recipe may help baked goods rise more.



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Wheat flour (per 1 cup/250 mL)

- 7/8 cup (220 mL) rice flour
- 34 cup (175 mL) potato flour
- 1 cup (250 mL) tapioca or millet flour
- 1 ¼ cups (310 mL) rye flour (not a safe substitute for a gluten-free diet)

For multi-ingredient flours

Multi-ingredient flour substitutes work best in baked goods. They can also be bought premixed.

- 4½ cups (1.1 L) white rice flour + 1½ cup (375 mL) potato starch + ¾ cup (175 mL) tapioca flour
- 1 cup (250 mL) rye flour (not a safe substitute for a gluten-free diet) + 1 cup (250 mL) potato flour

For thickening (per 1 Tbsp/15 mL wheat flour)

- ½ Tbsp (7 mL) cornstarch
- ½ Tbsp (7 mL) potato flour/starch
- 1 Tbsp (15 mL) tapioca flour
- 1 ½ Tbsp (22 mL) arrowroot flour

For meal sides

- · Wheat pasta and couscous substitutes: gluten-free pasta, rice vermicelli, quinoa, rice
- Bread substitutes: gluten-free bread (available in most grocery stores)

For breakfast and snack

- Cereal substitutes: gluten-free certified cereals (read labels carefully)
- Rice cakes or other gluten-free crackers
- Quiche wheat flour crust substitute: chickpea flour, quinoa flour

Notes

- Children with wheat allergies cannot eat most gluten products although some children
 may be able to eat food items made with oats, rye and barley which contain gluten. It is
 important to check with parents of children with wheat allergies to find out what
 their child can tolerate.
- Barley is "cross-reactive" with wheat. This means an allergic reaction can occur because the proteins from barley and wheat are similar.
- Rye bread may contain wheat flour.





Allergy-Friendly Recipes

Cookspiration - Dietitians of Canada

- Egg-free recipes
- Dairy-free recipes
- Soy-free recipes
- Gluten-free recipes
- Wheat-free recipes

Food Allergy Canada

• Allergy-friendly recipes

Kids with Food Allergies

• Safe Eats® Allergy-Friendly Recipes: The Largest Collection of "Free Of" Recipes

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