MENU PLANNING

Common Food Allergen Substitutions



Managing Food Allergies

Keeping children with food allergies safe requires trusting partnerships and clear communication between child care providers and families. It is recommended that cooks and/or supervisors meet and discuss a child's special dietary needs upon enrollment or when needed to promote consistent and clear communication between all staff and the family. In

some cases, parents may need to bring in an ingredient or food for their child.

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

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.

What is a Food Allergy?

<u>Food Allergy Canada</u> 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 Health Canada include:

Eggs

Soy

Milk

• Shellfish (e.g., shrimp, crab, lobster, mussels)

Mustard

Sesame seeds

Peanuts

• Tree nuts (e.g., walnuts, almonds, hazelnuts, cashews)

Wheat

• Fish (e.g., cod, halibut, salmon, tilapia, trout, tuna)

MENU PLANNING - Common Food Allergen Substitutions

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 puree, sweet potato puree or other fruit purees
- ¼ cup (60 mL) silken tofu, pureed
- 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 ½ Tbsp (22 mL) vegetable oil + 1 ½ 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)
- 1/4 cup (60 mL) fruit puree + increase both baking powder and baking soda by 25%

Scrambled egg/omelette/frittata/quiche

- Tofu scramble
- Silken tofu omelette/frittata/quiche

Milk Substitutes

For beverages

Milks from other animals, (e.g., goat, sheep) are not safe alternatives for those allergic to cow's milk since most children will react to these alternative milks as well.

- 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, pureed

Butter

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

For snacks

Yogurt

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

Cheese

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



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

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 $25^{\circ}F$ less). Adding $\frac{1}{2}$ tsp (2 mL) of baking powder per 1 cup (250 mL) of substitute flour or an extra egg in the recipe may help baked goods rise more.

Wheat flour (per 1 cup/250 mL)

- ½ cup (220 mL) rice flour
- ¾ cup (175 mL) potato flour
- 1 cup (250 mL) tapioca or millet flour
- 1 ½ cups (310 mL) rye flour (not a safe substitute for a gluten-free diet)

MENU PLANNING - Common Food Allergen Substitutions

For multi-ingredients 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 + 1 cup (250 mL) potato flour (not a safe substitute for a gluten-free diet)

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 if their child can tolerate oats, rye or barley.
- Barley is quite "cross-reactive" with wheat. This means an allergic reaction can occur because the proteins from barley and wheat are similar.
- Often rye bread will also contain wheat flour.

MENU PLANNING – Common Food Allergen Substitutions

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 (English Only)

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

This original resource was adapted in 2019 with the permission of **Ottawa Public Health** and revised in 2024. For educational and non-commercial purposes only.