# **Allergen Management for School Nutrition**

2020





## 15 Million Americans have a food allergy



4.5% of the US Population

1 in every 22 people

Food allergy carries a risk of anaphylaxis, which is unpredictable in occurrence and severity.

- Every 3 minutes a food-allergy reaction sends someone to the ER.
   200,000 emergency room visits per year.
- According to the FDA, there are about 200 deaths each year from food allergens.
   Half of these deaths occur in a foodservice operation.

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## Children are impacted the most!

The CDC has indicated that more children have food allergies than adults.

- 8% of students are affected by food allergies, and the incidence is increasing.
- 1 in 13 kids have a food allergy about 2 kids in every school classroom.
- 22% of severe food allergy reactions at school happen to students with no previously known food allergy.
- Minority populations are underdiagnosed for food allergy so may not have a diet plan or even know they
  have an allergy until they have a life-threatening reaction.
- 55% of all EAIs (epinephrine auto-injector) used in schools are for kids having their first reaction to food.



Hello. Welcome. My name is Michelle Hill, I am a Culinary Allergen Specialist, working with FoodSafetyGuy and I am here to speak about allergen management for school nutrition. Thank you for joining me today. I am so happy to be sharing this information with you.		

## **Bullying behavior around allergy**

- 35 45% of children with food allergies report experiencing bullying.
- Children with food allergies are twice as likely to be bullied compared with children without.
- · Teasing about the food allergy by classmates at school is the most common experience, but having the allergenic food thrown at them is also reported.
- · Teasing and bullying are underrecognized issues and carry significant psychological and physical risk.
- · This demonstrates the ongoing need to educate communities about food allergy and the impact of
- · We must address bullying directly and use the incidence to promote a dialogue between students, parents, schools, and health care providers to identify and address bullying when it occurs.
- As a society, we must strive to ensure that no one is bullied because of food allergies, and no one dies from food induced anaphylaxis.

## Kids with allergy face more challenges

"When I have a first bite, I think, Is this it? ... Will I die? ... Gabe - 15 years old

Age	Foods most involved
	and severity of response
≤ 4 years old	↑Milk
	↑Egg
	↑Fish
	↑Peanut
4 – 14 years old	↓Milk
	↓Egg
	↑Peanut
	↑Tree Nut
≥ 14 years old	↑Peanut
	↑Tree Nut
	↑Shellfish
	↑Fish
	Fruits
	Vegetables

- · Research tells us that children with any chronic condition have 2x the risk of developing mental health issues.
- Coping every day with uncertainty = increased anxiety and/or risktaking behaviors.
- · Living with uncertainty impacts
  - · A child's sense of control (or lack of control)
  - . Their beliefs about risk (may be too worried, or not careful enough)
  - . Their vigilance may wane due to perceived sense of security if no reaction has occurred
  - · Their confidence in their personal safety and the safety of their surroundings may be challenged.
- · Uncertainty is compounded by a general lack of awareness around food allergy and allergens.
- · Always being aware and alert to the possibility of danger is a heavy burden for children in their everyday lives.
- · Children respond by beginning a search for normality, an assurance that they are safe, accepted, and understood.

## Challenges for parents with food-allergic kids

'I am absolutely terrified that I will buy something with nuts in it by mistake ... if anything happens, I will never get over it.' (Mother of Treyvonn, age 6)

Many parents say the anxiety associated with the risk of a potential reaction has more profound effects on emotional and social aspects of a child's everyday life than the actual, physical allergic reaction.

#### Living with a food allergy means constant -

- · Reading food ingredient labels.
- · Concern for cross-contact.
- · Vigilance in a variety of social activities.
- Immediate access to an auto-injector.

#### Parents develop their own logic and validity of allergen controls as they live and cope with food allergy.

- · Living with risk and coping everyday engenders emotions such as confusion, anxiety, uncertainty, frustration, and sometimes anger.
- Food allergy requires a specialized diet that costs more money to maintain than a "normal" diet this can be financially burdensome.
- · Allergy must be diagnosed by a licensed physician so those with lack of access to healthcare are under diagnosed and do may have an EAI or an Individual Health Plan in relation to allergy.


When bullying does occur, we need to face it, head on, and use the incident as a chance to open dialog between

all parties involved and to find a way to provide acceptance and understanding to this vulnerable individual.

## Food Allergy Control = Food Safety

Major factors that impact thinking and behavior around food allergy and safety include

- 1. Commonality of food allergies 10% of the Human population suffer from at least one food allergy
- 2. Omnipresence of food in our lives
- 3. Risk of fatal anaphylaxis

How people weigh these odds impacts precautions taken, anaphylaxis management, and psychosocial functioning. (i.e., the perception of the "crazy Mom" who thinks her kid is allergic to everything.)

Rarity of fatal food-induced anaphylaxis can evoke a range of responses in people.

- · Some allergic people feel reassured when they realize that fatal anaphylaxis most likely will not happen.
- Others may engage in risky behaviors, such as not carrying or administering epinephrine autoinjectors.
- · Knowing fatal anaphylaxis is a possibility can increase stress and anxiety and decrease quality of life.
- The rarity of fatal anaphylaxis can also lead to food allergies being mocked or trivialized.

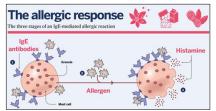
## **Critical Skills for Allergen Management**

- 1. Recognize the symptoms and possible triggers of anaphylaxis.
- 2. Know the differences between a food allergy, a food intolerance, and other food-related diseases (i.e., Celiac Disease)
- 3. Identify the "Big-8" allergens and how they appear in food.
- 4. Identify personal hygiene best practices to avoid cross-contact.
- 5. Apply the correct methods for cleaning surfaces and utensils.

## What is Food Allergy?

Food allergy is the immune system's response to the protein structure of a food molecule.

- · More accurately, food allergy is an immune response to the presence of a specific series of amnio acid sequences within the protein structure of the allergenic food.
- · Specific sets of amino acids sequences are shared among disparate populations of plants and animals, which is the root cause of cross-reactivity.
- When the food is eaten, the immune system mistakenly considers it to be harmful and releases chemicals that cause the symptoms of an allergic response.



https://www.rsb.org.uk/biologist-features/158-biologist/features/1512-focus-on-allergie

## Food Allergy -vs- Food Intolerance -vs- Food Sensitivity

#### The question is, "How does the offending food protein affect the body?"

#### Food allergy activates the immune system and releases histamine.

- Histamine can affect the body immediately or within a few hours of eating the food.
- · The reaction can be life threatening.

#### Food intolerance affects the digestive system.

- · Symptoms of the intolerance come on gradually.
- · The reaction is usually not life threatening.

#### Food sensitivity can refer to -

- Food allergy
- · Food intolerance
- · Any other adverse reaction to food

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## **Food Allergy Symptoms**

#### Allergic reactions can be (alone or in combination)

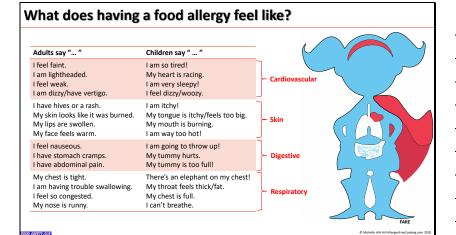
- Nausea, digestive upset
- Abdominal discomfort/pain
- · Vomiting and/or diarrhea
- · Wheezing or shortness of breath
- Itchy throat
- Hives or itchy rashes (about 50% of the time)
- Swelling of the body face, eyes, hands, feet
- Dizzy (due to quick drop in blood pressure)







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## **Anaphylaxis Triggers**

#### Immune System (IgE reaction)

- Foods
- Insect bites (bees, wasps ... )
- Medication (antibiotic, NSAIDs, biologics)

#### **Direct Mast Cell Activation**

- · Physical factors, including exercise, exposure to heat and cold, and sunlight
- Ethanol (alcohol)
- Medication (opioids)

#### Idiopathic (no apparent trigger)

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## **Cross reactors and Oral Allergy Syndrome (OAS)**

#### **Examples of known cross-reactors**

% chance of Cross-reactivity	Allergen	Cross-reactors
90%	Cow's milk	Goat's milk Sheep's milk
5%	Cow's milk	Mare's milk (horse) Donkey's milk
50% show allergy 5% suffer a reaction	Peanut Soybean	Beans Lentils
35%	Peanut	Tree Nuts
High	Walnut	Pecan
High	Cashew	Pistachio
50%	Fish (salt or freshwater)	Allergic to 1, allergy to All
75%	Crustacean Shellfish	Dust mite dander Cockroach dander
50%	Latex (natural rubber)	Banana Avocado Kiwi Water Chestnut

#### Cross-reaction can be elicited by any food allergen.

TYPES OF ALLERGIC REACTIONS

- Some people with 'food allergy' have an aeroallergen that cross-reacts with a food.
- The most common of these cross-reactions is between birch pollen, and tree nuts, apples, and other fruit and vegetables.
- Symptoms can include itching or tingling of the lips, tongue, and roof of the mouth or throat.
- There may be hives around the mouth area where the food came into contact with the skin or swelling of the lips, tongue, and throat tightness.
- In less than 3% of sufferers, symptoms may become systemic (beyond the mouth or throat) or result in anaphylaxis.

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## Epinephrine > first-line treatment for anaphylaxis

EAI - Epinephrine Auto Injector (such as EpiPen\* and EpiPen Jr\*)

- EAIs are used for the emergency treatment of life-threatening allergic reactions (anaphylaxis) caused by:
  - Allergens
  - Exercise
  - Unknown triggers
- EAIs are only available with a prescription for people who are at increased risk for life-threatening reactions.
- EAls are expensive and are issued in a "twin pack" of 2 autoinjectors.

EAIs are intended for immediate use – as emergency supportive therapy only.

30% allergic people will suffer initial symptoms, followed by a delayed wave of symptoms 2 - 4 hours later, called a bi-phasic response.

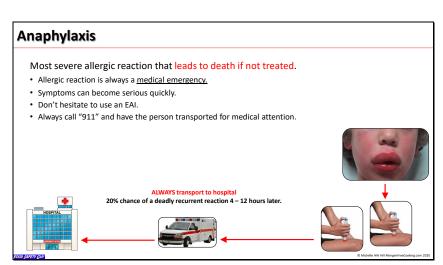
- · Delayed biphasic responses may not respond to epinephrine
- · May not be prevented by IV steroids
- Most often results in death (especially when epi is not injected ASAP).

#### Don't "Wait and see what happens – maybe we don't need to call 911".

- . The risk of death due to anaphylaxis outweighs any other concerns, existing studies clearly favor using epinephrine.
- · There are no medical conditions which absolutely prohibit the use of epinephrine when anaphylaxis occurs.
- After EPI administration, person must be transported by emergency medical services (EMS) to the nearest hospital emergency department, even if the symptoms appear to have resolved.

EAIs (epinephrine Auto Injector) is the emergency treatment for life-threatening reactions.
LAIS (epiniepinine Auto injector) is the emergency treatment for ine-time atening reactions.

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## Food allergens that are responsible for 90% all reaction. The Big-8 Peanut Egg (White and Yolk) Tree Nut Wheat (Almond, Cashew, Pecan) (Barley, Spelt, Wheat) Crustacean Shellfish Soy (Crab, Lobster, Shrimp) (Tofu, Edamame, Soybean) Dairy (Bass, Flounder, Cod) (Milk, Butter, Cheese)

## **Dairy**

Casein - protein is present in all mammalian milks including those from cows, sheep, goats, and human breastmilk.

- TAKE ACTION!
- 1. Identify reaction
- 2. Treat immediately with EAI

Bulking agent in medications

Verify Rx with Pharmacist

- The frequency of true milk allergy is about 5% of the human population.
- · Onset usually occurs in the first year or two of life.
- · Most common allergy for kids under 6 years old.
- · 80% develop tolerance by 16 years of age.

#### **Relevance to School Nutrition**

- Milk is offered to students every single day.
- Shredded cheese and milk-based dressing may be available on a salad bar thoughtful setup is crucial in preventing cross-contact.
- Be able to identify food or drink that is served or sold that contain Dairy proteins.

#### Cafeteria Management

- · Awareness that Dairy allergy can be triggered by ANY kind of animal's milk.
- Any form of casein protein, such as in "Dairy-free Cheese" can trigger a reaction.
- · Prompt cleanup of any spills on high-touch surfaces, or in common areas, is critical as Dairy can be a potent contact allergen.

Allergy is regionally specific and has to do with what you eat most preferentially within your food supply, what is the most present proteins, and what is most frequently consumed by people.



## **Peanut**

TAKE ACTION!

- 1. Identify reaction
- 2. Treat immediately with EAI
- 3. Call 911
- About 3% of Americans suffer from peanut allergy.
   Considered a common allergen, and likely increasing in prevalence.
- · Starts early in life, between 6 to 24 months of age.
- · Only 15% of people develop tolerance over their lifetime.
- Complete avoidance is necessary as Peanut allergens tend to provoke deadly reactions.

#### **Relevance to School Nutrition**

- School policy on Peanuts recommend "Zero Tolerance" as peanut allergy tends to provoke anaphylaxis.
- Be able to identify food or drink that is served or sold that contain Peanut protein.

#### Cafeteria Management

- · Awareness that peanuts can readily cross-react with any other legume, such green peas or Red Kidney beans.
- Care in preparation and service is critical to prevent cross-contact between the allergen-free food and the allergenic food.
- Peanut butter is very sticky and is difficult to remove from prep surfaces and utensils pay special attention to clean thoroughly any areas that are visibly soiled with peanut proteins as they can be a potent contact allergen.
- Aggressive, physical cleaning (with hot soapy water) prior to sanitizing all food contact surfaces, including high-touch areas (chair backs, table edges) after each use.

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#### Egg

TAKE ACTION!

3. Call 911

1. Identify reaction

2. Treat immediately with EAI

Allergy to egg proteins usually presents around 1 year of age, reflecting the typical age of introduction of egg into a child's diet.

- · 2.5% American 3-year-olds are allergic.
- · 2% remain allergic into adulthood.
- Is seen as a "life-long" allergy.

Tolerance to egg is achieved spontaneously, with resolution in:

- 37% allergic children by age 10
- · 68% allergic children by age 16

#### **Relevance to School Nutrition**

- · At times cooked egg patties are served; hard-boiled eggs may be offered on a salad bar.
- Egg as part of a baked good is less allergenic than a whole egg or liquid egg product careful cleanup is required during and after preparation.
- · Watch the mayonnaise (it's IS egg)!

#### Cafeteria Management

- Awareness that egg can be a hidden ingredient in many foods.
- High-touch and common surfaces soiled with egg must be thoroughly cleaned as egg is a potent contact allergen.

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## Crustacean Shellfish

TAKE ACTION!

1. Identify reaction

3. Call 911

- 2.5% of Americans are allergic to Crustacean Shellfish.
- 2. Treat immediately with EAI
- Shellfish allergy is not usually found in kids under 6 years of age.
- It is rare to develop tolerance and this is usually a life-long allergy.
- Shellfish protein can act as an aeroallergen that provokes anaphylaxis through inhaled cooking aroma and steam.
- Shellfish cross-react with dust mites and cockroach dander.
- Astaxanthin is an algae eaten by shellfish and other animals and the reason for the shell coloring –
  it is also the cross-reactor between Crustaceans (and it appears in farm-raised fish!).

#### Relevance to School Nutrition

- With the acceptance of Surimi as a protein option, we must now be vigilant when this product is served as it can readily cross-react for those with a shellfish allergy.
- · Be aware that shellfish allergy can be triggered by certain vitamins and supplements.

#### Cafeteria management

 Aggressive, physical cleaning (with hot soapy water) prior to sanitizing all food contact surfaces, including hightouch areas (chair backs, table edges) after each use.

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#### Tree Nut

TAKE ACTION!

- 1. Identify reaction
- 2. Treat immediately with EAI
- 3. Call 911
- · Most children display this allergy around 2 years of age.

· 2% of the Human population has an allergy to at least 1 tree nut.

- · Only around 10% will develop tolerance over their lifetime.
- Tree nut allergy is frequently triggered by pollen allergies (OAS), especially in those allergic to Birch.
- · Complete avoidance is necessary as Tree Nut allergens tends to provoke a deadly reaction.

#### Relevance to School Nutrition

- School policy on Tree Nuts recommend "Zero Tolerance" as these allergies tend to provoke deadly reactions.
- · Many dairy replacements are nut-based (almond milk) and nuts butters are sometimes used in place of peanut butter.
- Nut products often have incomplete or incorrect allergen label information.

#### Cafeteria management

- · Awareness that Tree Nut allergy can be triggered by pollen (important for outdoor events).
- Tree nut allergens can be potent contact allergens and aeroallergens.
- · Aggressive, physical cleaning (with hot soapy water) prior to sanitizing all food contact surfaces, including high-touch areas (chair backs, table edges) after each use.



## Sov

#### TAKE ACTION!

1. Identify reaction

2. Treat immediately with EAI

Soy has been genetically modified, unless labelled as "non-GMO". 3. Call 911

#### oy is a Contact Allergen Some kids with food allergy

to soy also will suffer from environmental exposures.

## Common sources of Soy:

- Washable markers/paint
- · Gluten free playdough Newsprint
- . 1.4% of children under 1 years old are allergic soy-based infant formulas can be very harmful to this population.
- · Allergic response to soy proteins include inflammation of the nerve endings in the brain can develop into "organic brain disintegration".
- · Can cross-react with legumes such as peanuts, peas, green beans.
- . Soy is used a protein booster throughout US food supply.

#### Soy allergy is frequently outgrown, with resolution rates of:

- 45% by age 6.
- · 69% by age 10.

#### **Relevance to School Nutrition**

- With the acceptance of Surimi and Seitan as school lunch menu items, we must be vigilant as these products contain soy proteins.
- Also, please consider removing Edamame (young soybeans) from your salad bar.
- . Be aware that soy is often a "hidden ingredient" in many snack and protein-rich foods.
- · Label reading for soy is VERY IMPORTANT it can even appear in canned tuna (vegetable broth) and fruit juice (natural flavors).

#### Cafeteria Management

· Watch for signs of excitability and physical aggression as soy allergy provokes the production of adrenaline which impacts impulse behaviors in young children.



#### TAKE ACTION!

- 1. Identify reaction
- 2. Treat immediately with EAI
- 3. Call 911

#### 50% of fish-allergic suffer allergy to one or more fish (cross-reactivity).

- · Fish allergy usually starts in the second year of life.
- Fish allergy is most often a life-long allergy and rarely resolves during puberty.
- Offending proteins are Myosin (muscle) and is why salt water and freshwater fish cross-react.
- Fish oil supplements can contain enough protein to trigger an allergic reaction.

#### **Relevance to School Nutrition**

- With the acceptance of Surimi as a school lunch menu item, we must be vigilant as this product contains Fish proteins (usually Pollock, Cod, Plaice or Haddock).
- · Breaded Fish patties (usually Pollock) are sometimes served.
- Fish can appear unexpectedly in bottled sauces, marinades and dressing as it lends an Umami flavor.
- Fish proteins can be aeroallergens and so the aromas and steam from cooking can provoke anaphylaxis.

#### Cafeteria Management

• Fish can be a potent contact allergen - complete and thorough cleaning of utensils and surfaces is critical.



## Wheat

TAKE ACTION!

- 1. Identify reaction
- 2. Treat immediately with EAI
- 3. Call 911

Celiac Disease
Is an autoimmune
disorder that
requires strict
avoidance of
gluten-containing
grains.

Gluten and Gliadin are the allergenic proteins present in Wheat grains.

- 3.6% American Adults are allergic to wheat proteins.
- · 0.5% of 1-year-old children are allergic.

#### Wheat allergies can resolve as a child grows.

- 56% resolve by age 8.
- 65% resolve by age 12.

#### Relevance to School Nutrition

- · Childhood Nutrition Requirements for reimbursable school lunch are rooted in the consumption of whole grains and wheat products.
- . With the acceptance of Surimi and Seitan as school lunch menu items, we must be vigilant as these products contain wheat proteins.
- Gluten-free grains are still an allergen for those allergic to Gliadin proteins, as they occur is high amounts in these grains, such as quinoa, amaranth, millet, teff, sorghum.

#### Cafeteria Management

- · Gluten free is not wheat free.
- . Awareness that Wheat allergy can be triggered by aeroallergens from grass (important for outdoors).
- Crumb cleanup is critical as Wheat allergy can be a potent contact allergen.

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## Food Allergy - a life-threatening disability

Children with diagnosed food allergies are at-risk for anaphylaxis which is life-threatening so is recognized as a disability by the US Dept of Education and US Dept of Agriculture.

Federal Legislation	Web access
Section 504 of the Rehabilitation Act of 1973	https://www.dol.gov/agencies/oasam/centers-offices/civil-rights- center/statutes/section-504-rehabilitation-act-of-1973
The Americans with Disabilities Act (ADA)	https://www.ada.gov/
Individuals with Disabilities Education Act (IDEA)	https://sites.ed.gov/idea/
"Healthy, <b>Hunger-free Kids Act</b> of 2010" US Dept of Agriculture Public Law 111-296	https://www.govinfo.gov/content/pkg/PLAW-111publ296/html/PLAW- 111publ296.htm
Family Educational Rights and Privacy Act of 1974 <b>(FERPA)</b> (20 U.S.C. Section 1232)	https://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html
Health Insurance Portability and Accountability (HIPAA) Act of 1996 - Privacy and Security Rules	https://www.hhs.gov/hipaa/for-individuals/guidance-materials-for- consumers/index.html

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## Diet restriction → Disability → Accommodation

The school nutrition program must receive a signed statement by a licensed physician that identifies ...

- The child's disability (i.e., diet restriction due to life-threatening food allergy)
- An explanation of why the disability restricts the child's diet (anaphylaxis may occur with exposure)
- The major life activity affected by the disability (i.e., breathing)
- The food(s) to be omitted from the child's diet and the food(s) or choice of food(s) that must be substituted.

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## Accommodation > Individual Health Plan

#### School Administrators, Educators, Nurses, Nutrition Workers

All must follow the Individual Health Plan (IHP) and help to form and then follow the related Allergen Control Plan.

- 1. Identify the child's allergens.
- 2. Specify the nature of the child's allergic reaction.
- 3. Reduce risk of exposure to the known allergens.
- Provide emergency treatment to the student, during the school day and at Schoolsponsored activities, in the event there is an unintended exposure to an allergen.
- 5. Facilitate communication between the school and the student's healthcare provider.

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## Allergen Control - School



Encourage children, school staff, and volunteers to wash hands before and after handling or consuming food or drink.



#### With parental cooperation, create standard procedures for identifying children with allergies.

- A recent picture of each child could be kept in a location that is not visible to other children or the public.
- 2. A food matrix should accompany the photo, indicating the allergens that must be avoided.
- Procedures for identifying allergic students must follow the requirements in the Family Educational Rights and Privacy Act.

#### **Safety Strategies**

- Consider the children's needs, and be willing to make hard choices when necessary, such as declaring your school to be "Peanut free".
- Support an open dialog, with the student and caregivers, around issues concerning allergy.
- · Planning and prevention are much better than having to respond to a life-threatening reaction.
- Create an Allergen Control Plan and actively train staff to understand and follow it.

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## Allergen Control - Cafeteria



- · Know the signs, symptoms and behavior that can occur with allergic reaction.
- Be able to recognize each student that has a food allergy.
- Use a dedicated terry cloth and freshly-made, wash, rinse, and sanitizer buckets for cleaning always assume there is an allergen present – surfaces should be at least "visually clean".
- Wash tabletops, table edges, chair seats and backs with soap and water between every use.
- Have rapid access to epinephrine auto-injectors in cases of food allergy emergency and train staff to use them.



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## Allergen Control – Kitchen



Plan to make reasonable meal accommodations after receiving approval from a licensed physician through dietary orders, or as stated in the child's Individual Health Plan (IHP).

- · Provide advanced copies of menus for parents to use in planning.
  - Be prepared to share food labels, recipes, or ingredient lists used to prepare meals and snacks.
  - Keep current contact information for vendors and suppliers for easy reference regarding ingredients.
  - · Read all food labels and re-check with each purchase for potential food allergens.
- · Designate an allergen-safe food preparation area and prepare allergen-free food first.
- Keep food labels from all foods served to children with allergies for at least 24-hours after serving the food in case the child has a reaction.
- Escalate mistakes such as cross-contact with an allergen or errors in an ingredient list or menu immediately to administrators and parents.



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## **Allergen Control - Nutrition Workers**



#### It is critical that all food workers

- Understand that people with food allergies must totally avoid the allergenic foods.
- · Recognize allergen information on food labels.
- Know the contents of food(s) being sold or served.
- Describe how to prepare and cook food(s) for allergen safety, including cleaning equipment, surfaces, and tools.

#### Your personal hygiene practices can lead to cross-contact if you are not careful

- · Always wash your hands correctly and then maintain them properly.
- Follow the work attire guidelines put in place by your school because dirty clothes and aprons can carry food proteins that can cause an allergic reaction.



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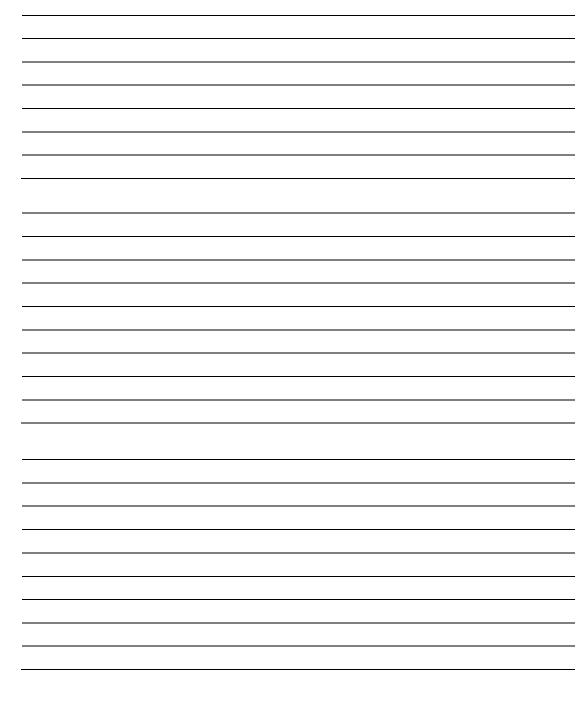
## Allergen Control - Food Preparation

Once an allergen is on your hands or clothes, there's a risk that you might have cross-contact with an allergen special order.

#### To prepare food for an allergic person

- 1. Designate tools and a prep area for allergen orders to be made.
- Remove your apron and put on a clean one. If a clean apron is not available, then remove your apron before working on the special order.
- 3. Wash your hands and put on fresh gloves.
- 4. Wash, rinse, sanitize all food contact surfaces and utensils *before* you begin preparation.
- Designate the prepared food through agreed upon means, such as colored stickers or flags with the child's name on it.





## Cross-contact -versus- Cross-contamination

#### Cross-contact

When one food comes into contact with another food, and their proteins mix; as a result each food then contains small amounts of the other food.

> Only a tiny amount of the offending food protein is enough to cause an allergic reaction in some people.

#### Don't confuse Cross-contact with Cross-contamination

Cross-contamination is the transfer of disease-causing organisms, such as bacteria and viruses, from one surface or food to another.



## How to wash your hands

## **Hand Sanitizers Do Not Remove Food Proteins**

Use soap and water or wipes



Wet hands and arms Use running warm



Apply soap Apply enough to build up a good lather. Follow the manufacturer's recommendations.



Scrub hands and arms vigorously for 10 to 15 seconds Clean fingertips, under fingernails, and between fingers.



Rinse hands and arms thoroughly Use running warm water.



Dry hands and arms Use a single-use paper towel or hand dryer.

## Clean, Sanitize, Disinfect

#### Cleaning

- The removal of visible soil from objects and surfaces.
- Accomplished using water with detergents or enzymatic products.
- Thorough cleaning is essential before disinfection as any materials that remains on a surface interferes with the effectiveness of disinfection.

#### Sanitizing

- · Reduces pathogens on a surface to safe levels.
- Accomplished using sanitizing agents, such as Quats (quaternary ammonium compounds), mixed with water to the correct concentration.

#### Disinfecting

- · A form of decontamination which eliminates many or all pathogenic microorganisms on inanimate objects.
- · Accomplished using disinfection agents, such as 5.25% Sodium Hypochlorite (Chlorine bleach), mixed with

water to the correct concentration.



## "Visibly Clean" all surfaces and utensils

Step 5: Allow the surface to air-dry.

#### Use a fresh set up every single time!



Step 1: Remove visible debris (crumbs, wrappers, etc.)

Step 2: Using a wet soapy wipe pulled from a freshly-made detergent bucket, aggressively wipe any area that are soiled with allergens.

tabletops which Step 3: Using a fresh wiping cloth pulled from the rinse water bucket, rinse resistant to wear



the detergent from the surface, being careful to sop up any extra liquid.

Step 4: Using a fresh wiping cloth pulled from the sanitizer bucket, apply sanitizer solution evenly across the surface.



Recent research has shown that thorough cleaning in this way removes allergens from a surface almost 100% of the time. The trick is focusing on debris removal and then scrubbing areas with known allergen soiling.

Most cafeteria

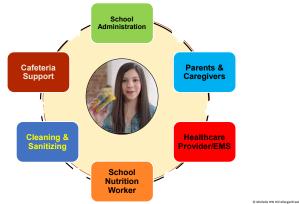
tables are made

with laminate

are highly

and tear.

# We are a Village!



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## Peanut - always present in ...

Arachis, Arachis hypogaea

Cacahuete

Arachis oil Beer nuts Nougat

Chinese nuts Crushed nuts crushed peanuts Earthnuts

Flavored nuts Goober nuts/peas Ground peanuts Ground nuts Hydrolyzed peanut protein

Hydrolyzed plant protein Hydrolyzed vegetable protein Mandelonas

Marzipan Mixed nuts Monkey nuts

Peanut

Peanut Brittle

Peanut butter

Expelled

Extruded

Peanut Sauce Peanut sprouts Peanut syrup Nu nuts Satay Nut pieces Spanish peanuts Nutmeat Virginia peanuts

Peanut paste

· Morsels, chips Peanut flour Peanut oil · Cold pressed

Dry, powdered



## Peanut - sometimes

Artificial flavoring Artificial nuts Desserts Baked goods Dried fruit mixes

**Biscuits** Egg rolls **Boiled peanuts** Enchilada sauce Breakfast cereals **Ethnic Foods** 

Candy Flavoring Chili Fried foods

Chinese dishes Graham cracker crust Chocolate Gravy

Cookies Health food bars

Crumb toppings Ice creams Lollipops

Mole sauce Natural flavoring

Pesto Praline

Salad/salad dressing

Sauces Snack foods

Soup



## Tree Nut - always present in ...

Almond Prunus dulcis (Rosaceae)

· Almond flour · Almond meal Almond milk

· Almond paste Anacardium nuts

Bush nut Macadamia spp. (Proteaceae)

Beech nut/Beechnut Fagus spp. (Fagaceae) Brazil nut Bertholletia excelsa (Lecythidaceae)

Butternut Juglans spp. (Juglandaceae) Cashew Anacardium occidentale (Anacardiaceae)

Chestnut Castanea spp. (Fagaceae)

 Chinese American European

Chinquapin Castanea pumila (Fagaceae)

Filbert Corylus spp. (Betulaceae)

Ginko nut Ginkgo biloba L. (Ginkgoaceae) Hazelnut Corylus spp. (Betulaceae)

> Heartnut Juglans spp. (Juglandaceae) Hickory nut Carya spp. (Juglandaceae)

Lichee/Lychee nut Litchi chinensis Sonn. (Sapindaceae)

Macadamia nut Macadamia spp. (Proteaceae)

Mashuga nuts Nangai nut Nu-Nuts® Nut butter Nut meal

Nut oil (finishing oils) Nut paste Nut pieces Nutella ® Nutmeat

Pecan Carya illinoensis (Juglandaceae)

Pine nut Pinus spp. (Pineaceae)

 Indian nut Pignoli

 Pigñolia pignon nut

· pinyon

Pistachio Pistacia vera L. (Anacardiaceae)

Shea nut Vitellaria paradoxa C.F. Gaertn. (Sapotaceae)

 Sheanut · Karite (shea nut)

Walnut Juglans spp. (Juglandaceae)



## **Tree Nut - sometimes**

Artificial nuts

Flavored coffees

Natural nut extract

Baked goods

Flavoring (natural/artificial)

Nougat

Biscuits Breakfast cereals Frozen desserts

**Pastries** 

Candies

Frozen drinks Gianduja (a nut mix) Pesto Pralines

Caponata Cereals

Gremolata Health food bars Salads Snack foods

Chocolate

Ice cream

Vegan dishes

Chocolate spreads Dried fruit mixes

Mandelonas Marzipan

Dukkah

Mortadella

Ethnic Foods

Natural flavoring



## Crustacean Shellfish - always present in ...

Escargot

Sea urchin (beche-de-mer)

Lagouste/Langoustine

Shellfish

Caracoles Clams

Lapas Limpet Shrimp Snails

 Cherrystone Geoduck

Lobster Lopihi

Squid Whelks

 Little neck • Pismo Quahog

Mollusks Mussels

Octopus Cockle Oysters Crab Crawfish Periwinkles Crayfish Prawns Scallops

Crevette

Cuttlefish Ecrevisse

Scampo

Sea cucumber (beche-de-mer)



## **Crustacean Shellfish - sometimes**

Anchovies

(contains protein similar to shellfish)

Ethnic soups and dishes

Bouillabaisse

Calcium supplements

Chitin

Clamato

Cuttlefish ink Fish sauce

Fish stock

Flavoring (natural/artificial)

Marinara Oyster sauce Pescatore sauce

Prawn chips Prawn crackers

Sauces (fish sauce)

Seafood extender Seafood flavoring (clam)

Squid ink Surimi



## Dairy - always present in ...

#### Casein

A protein is present in all mammalian milks including those from cows, sheep, goats, and humans.

#### **ALWAYS Contains Dairy**

Butter Chocolate Hydrolysates Quark Buttermilk Rennet Cream Ice cream Butterscotch Curds Imitation milk Sour cream Caramel Infant formula Whey Custard Casein & Galactose Kiefer Yogurt caseinates Ghee "Lact..."

Cheese (all types) Half & Half

- Inhalers causing sinus and airways to inflame
- must be avoided these product are made for the lactose-intolerant and not the



## **Dairy - sometimes**

Basted foods Dips Lactose-free products Sausages Basted meats Egg replacers Seasoned foods cheese Battered foods Fat substitutes Snack food butter **Biscuits** Flavored coffees Soup mixes · ice cream Flavored drinks Bottled water (silica) Soups Liquid meal replacers Flavoring Bread Sports drinks Margarine spreads Breadcrumbs Fried foods Supplements Natural flavors vitamins Breakfast cereal Frozen desserts Nougat minerals Cakes Fruit juice (orange juice) Pastries Whitener (incl. non-dairy) Candy Glazed foods Probiotics Gravy Chocolate Gluten-free baking mixes Pudding Protein shakes Coated foods Gluten-free pancake mix Rotisserie Poultry Stock Coconut products Gluten free products Salad dressings Smoothies Cookies High-protein flour Sauces and spreads

Deli meats



Cracker meal

## Wheat - always present in ...

Noodles

Instant mashed potato

- · Gluten protein
- · Gliadin protein

Whole wheat berries



All purpose flour Durum wheat (Triticum durum Desf.) Pasta Atta flour Einkorn (Triticum monococcum L.) Seitan Bran Semolina (Triticum durum Desf.) Emmer (Triticum turgidum L. subsp. dicoccon) Bread Farina Soy sauce Breadcrumbs Farro Spelt (Triticum spelta L.) Bulgar Flour Stoneground Wheat Burghul Gluten Tabbouleh/Tabouleh Cereal extract Graham flour Triticale (x Triticosecale ssp. Wittm.) Club wheat (Triticum compactum Host.) Kamut (Triticum polonicum L.; Khorasan wheat) Triticum Common wheat (Triticum aestivum L.) Malt Wheat Matzo Wheatgrass Couscous

-
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## Wheat – sometimes

Baked goods Gelatinized starch Pancakes Baking mixes/powder Glucose syrup Pasta Battered fried foods Gravy Pastry Beer Hydrolyzed vegetable protein (HVP) Pizza

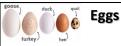
Biscuits Ice cream, ice cream cones Processed meats Breakfast cereals Icing sugar Sandwich wraps Candies Instant drink mixes Sauces/gravy mixes Canned soups/stocks Malted milk Seitan

Caramel color Maltodextrin Snack foods

Chips Marshmallow Soy, shoyu, tamari, teriyaki sauce

Chocolate Modified food starch Starch Modified starch Corn chips Stock cubes Monosodium glutamate (MSG) Crumbed foods Surimi

Dextrin Mustard Textured vegetable protein Flavoring (natural/artificial) Noodles Vegetable gum Vegetable starch Food starch Oats





## Soy - always present in ...

- · Cross-reacts with peanuts, peas, green beans, carob (all are legumes).
- Genetically-modified unless labelled as "non-GMO".
- · Used a protein booster throughout food supply

#### **ALWAYS Indicates Soy**

Edamame (young soybeans) Soy, Soja, Soya Soy sauce Hydrolyzed Plant Proteins (HPP) Soy albumin Soy starch Hydrolyzed soy protein (HSP) Soy flavoring Soy yogurt Hydrolyzed Vegetable Protein (HVP) Soybean Soy flour Kinako (roasted soy flour) Soy gum Tamari Kouridofu (frozen tofu) Soy infant formula Tempeh Miso (fermented soy) Soy lecithin Teriyaki sauce

Natto (fermented soy) Soy milk Textured vegetable protein (TVP)

Natural flavors (soy oil is flavor carrier) Soy nuts Tofu

Nimame (simmered soybeans)

Soy oil

TSP (textured soy protein)

Okara (soy pulp as protein extender)

Soy protein

TVP (textured vegetable protein)

Shoyu sauce Soy protein isolate Yuba

DOD SAFETY GUY

0



## Soy - sometimes

#### MAY Indicate Soy

Baby foods Fruit juice (BVO) Potato Chips Baking mixes Gluten free products Sauces High-protein products Seasoned salt Bread Breakfast cereals Liquid meal replacers Snack bars Cakes Margarine Soups (canned or packet) Cheese substitutes Meat products Vegetable broth cold cuts Chocolate Vegetable oil · beef burgers Commercial fruit products Vegetable paste · meat paste/pies Cookies Vegetable products · minced beef Crackers sausages/hotdogs Vegetable protein Vegetable shortening

Dairy substitutes/replacers

Desserts and mixes

Nut mixes

Pancake/waffle mixes

Egg substitutes Pasta/pizza bases

Ethnic Foods Plant-based meat replacers

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## Fish - always present in ...

Anchovies	Fish	Pangasius	Scrod
Barramundi	Flathead	Perch	Shark
Bass	Flounder	Pickerel	Smelt
Bluefish	Grouper	Pike	Snapper
Bream	Haddock	Plaice	Sole
Carp	Hake	Pollock	Swordfish
Catfish	Halibut	Pompano	Tilapia
Caviar	Herring	Porgy	Trout
Char	Mackerel	Rockfish	Tuna
Chub	Mahimahi	Roe	White Fish
Cisco	Marlin	Salmon	Whiting
Cod	Monkfish	Sardine	
Eel	Orange Roughy	Sashimi	

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