Agenda

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- What are Food Allergies
- Top Eight Allergens
- Causes/Current research
- Allergic reaction symptoms
- Food intolerances/sensitivities
- Celiac Disease
- Emergency procedure
- Conclusion
Introduction

- Born and raised in the Twin Cities
- Undergrad: University of Wisconsin - Stout
- Dietetic Internship: Sodexo DI in New Bedford, Massachusetts
- Today: Registered Dietitian at MSU Mankato
  - Sodexo
- Certified Master Trainer through Allertrain by MenuTrinfo
  - Managers, chefs, cooks, teachers, campus security, coaches, health services
- Entity Trainer
  - Epinephrine Auto-Injector Law
  - MN state law now allows recreation camps, colleges, universities, preschools, and daycares to obtain and use epinephrine auto-injectors without a prescription with specific training.
What are Food Allergies

- Food allergies are serious and potentially life threatening immune system reactions to a food protein
- Body doesn’t recognize the food as food, causing a negative affect
- Even trace amounts of an allergen can cause a reaction
- Symptoms range from mild to deadly
  - Anaphylaxis - severe life threatening reaction
- Reactions can be immediate or happen hours later
- Each reaction is different
- No cure – only complete avoidance of allergen/allergens

Affecting 15 million Americans

1 in 13 children, meaning 2 in every classroom
Top Eight Allergens

- Account for 90% of reactions
- Wheat
- Milk
- Eggs
- Shellfish
- Fish
- Treenuts
- Peanuts
- Soy
<table>
<thead>
<tr>
<th>Allergen</th>
<th>Commonly Found</th>
<th>Surprising Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peanuts</td>
<td>Peanut butter</td>
<td>Lupin (gluten free flour substitute), lawn fertilizer</td>
</tr>
<tr>
<td>Treenuts</td>
<td>Mixed nuts</td>
<td>Soap, shampoo, lotion</td>
</tr>
<tr>
<td>Milk</td>
<td>Milk, yogurt</td>
<td>Liquid hand soap</td>
</tr>
<tr>
<td>Eggs</td>
<td>mayonnaise</td>
<td>Paint, flu vaccine</td>
</tr>
<tr>
<td>Wheat</td>
<td>Pasta, beer</td>
<td>Communion Wafer, playdough</td>
</tr>
<tr>
<td>Soy</td>
<td>Edamame, tofu</td>
<td>Processed / canned meats</td>
</tr>
<tr>
<td>Fish</td>
<td>Bass, cod, salmon</td>
<td>Reactions can occur where fish is being cooked since the protein can travel in the steam, Caesar dressing, Worcestershire sauce</td>
</tr>
<tr>
<td>Shellfish</td>
<td>Crab, shrimp, lobster</td>
<td>Fish oil supplements</td>
</tr>
<tr>
<td>Sesame</td>
<td>Sesame seeds &amp; oil</td>
<td>Hummus, candy corn</td>
</tr>
</tbody>
</table>
Causes and Research

- Cause is unknown
- Theories - lack of midwestern lifestyle/city life, food is prepared differently - cooking techniques and chemicals, changes in our food supply
- LEAP Study (Learning Early about Peanut Allergies)
  - 600 infants at risk for developing peanut allergies (eczema, egg allergy or both)
  - Divided into two groups - one receiving peanut-containing foods to eat regularly and one who was told to avoid peanut-containing foods
  - Followed until the age of 5
  - Regular consumption of peanut-containing foods lead to an 81% decrease in developing a peanut allergy
- Needs to be more research and more funding!
# Symptoms of an Allergic Reaction

For a suspected or active food allergy reaction:

**FOR ANY OF THE FOLLOWING SEVERE SYMPTOMS**

- **LUNG:** Short of breath, wheezing, repetitive cough
- **HEART:** Pale, blue, faint, weak pulse, dizzy
- **THROAT:** Tight, hoarse, trouble breathing/swallowing
- **MOUTH:** Significant swelling of the tongue and/or lips
- **SKIN:** Many hives over body, widespread redness
- **GUT:** Repetitive vomiting or severe diarrhea
- **OTHER:** Feeling something bad is about to happen, anxiety, confusion

**OR MORE THAN ONE MILD SYMPTOM**

- **NOSE:** Itchy/runny nose, sneezing
- **MOUTH:** Itchy mouth
- **SKIN:** A few hives, mild itch
- **GUT:** Mild nausea/discomfort

1. **INJECT EPINEPHRINE IMMEDIATELY.**
2. **Call 911. Request ambulance with epinephrine.**

Do not depend on antihistamines. When in doubt, give epinephrine and call 911.
Food Intolerances/Sensitives

- Different than food allergies
- Digestive system response caused by a food substance
- Caused by the inability to properly digest the food
- Do not have the life-threatening anaphylaxis response so no immediate threat to health but can still cause many other symptoms

- Common intolerances: milk, gluten, sulfites, and beans
- Example: Lactose intolerance - unable to digest lactose (a sugar found in milk) because the body lacks lactase
Potential Symptoms of a food intolerance/sensitivity

- Symptoms can happen right away or up to three days later
- Makes it very hard to pinpoint which food is causing the issue
- Rash
- Diarrhea
- Constipation
- Cramping
- Nausea
- Headaches
- Migraines
Celiac Disease

- Celiac Disease is an autoimmune & digestive disorder where the ingestion of gluten leads to damage of the small intestine.
- Destroys the villi in the SI
  - Villi are tiny finger like projections that cover the surface of the SI
  - This affects the bodies ability to absorb nutrients leading to malnutrition and many other secondary conditions
- 1 in 133 Americans are believed to have Celiac Disease
  - About 1% of the population
- You cannot out grow the disease and the only treatment is a life long gluten free diet
What is Gluten?

- Gluten is a protein found in wheat
  - It is made up of two proteins called gliadin & glutenin’s
- Acts as the “glue” that helps hold foods together and maintain their shape
- Gives the food we eat a chewy goodness!
- Big 3 – wheat, barely and rye
Symptoms

- Unexplained iron deficiency
- Weight changes
- Abdominal cramping/pain
- Chronic diarrhea/constipation
- Vomiting
- Fatigue
- Anxiety/depression
- Bone or joint pain
- Malnutrition - pale skin, weight loss, sunken eyes, fatigue, dehydration
Emergency Procedures

- For a severe reaction – seconds count!

1. Make sure the person gets a dose of their epinephrine
2. Call 911
   - Be clear and concise with your location
   - Tell the person it is an allergic reaction so they know to bring epinephrine
3. Make sure the person is taken to the ER
   - Do not stand or move them - this could speed up the reaction
   - Find out what your school's procedure is!
Epi Pen and Auto Injectors
How to use an epi pen/auto injector

**Epi Pen**

- Remove blue safety release by pulling straight up without bending or twisting it.
- Swing and firmly push orange tip against the outer thigh so it “clicks” and hold for 10 seconds to simulate delivery of drug.
- Tip extends after use.

**Autoinjectors**

- Pull of red safety guard
- Place black end against outer thigh, then firmly press and hold for 5 seconds.
Conclusion

- Food allergies are very serious and should be treated with precaution
- Top eight (wheat, milk, soy, eggs, tree nuts, peanuts, shellfish, fish)
- Food allergies, celiac disease and intolerance are different but should be treated with the same seriousness
- Put everyone in the same “bucket”
- In a reaction seconds count!
  - Be sure to have the conversation at your school, better to be prepared!
- Great Resource – FARE – Food Allergy and Research Education

- Questions??