

Food Allergy

- **Allergy, idiosyncratic Rx., intolerance**
- **Common Causes of Food Allergy**
- **Symptoms**
- **Diagnosis**
- **Control**

Food Allergy

- **Allergy**
- **Antigen -antibody reaction in sensitive individuals**
- **IgE mediated**
- **Anaphylaxis**
- **Idiosyncratic reactions**
- **Intolerance**



◆ Food Intolerances

- ◆ abnormal reaction to food
- ◆ Does not involve immune system
- ◆ Metabolic disorders or enzyme deficiency
 - ◆ e.g Favism, Lactose intolerance

◆ Ideosyncratic illnesses

- ◆ unknown mechanism
- ◆ may have many different mechanisms
- ◆ may be trivial or severe, life threatening
- ◆ Only confirmed thorough carefully controlled DBPCFC



Many types of food allergies

- Farm products
- Meats
- Fish
- Fruits/Vegetables
- Nuts/Seeds
- Beans
- Spices

BIG EIGHT

- **Cereals (Gluten) - wheat, rye, barley, oats**
- **Crustaceans(shrimp, shell fish)**
- **Eggs and Egg products**
- **Fish and fish products**
- **Peanuts and products**
- **Milk and milk products**
- **Tree nuts and nut products**
- **Soy beans and products**

WHO IS AFFECTED?

- **2.5 % adult population**
 - **1.14 % Tree nuts/pea nuts (U.S.)**
 - **9.5 % pea nut(U.K.)**
- **5.0 % Children (5-8 % in infants)**

SYMPTOMS OF FOOD ALLERGY

IgE mediated allergy

➤ Cutaneous

- Urticaria, eczema, atopic dermatitis, angioedema, pruritis**

➤ Respiratory

- Asthma, rhinitis**

➤ Gastro Intestinal (GI)

- Nausea, Vomiting, dairrhea, abdominal cramps, colic**



Symptoms of food allergies

Important to remember that different people may react in different ways.

- Diarrhea
- Weakness
- Lack of Energy
- Tension-fatigue syndrome
- Bone/Joint pain
- Hives
- Skin rash
- Itchy, irritated skin
- Trouble breathing
- Anxiety
- Facial swelling
- Headache

DIAGNOSIS OF FOOD ALLERGY

- **Challenging**
- **Must prove association of food /food component and adverse rx.**
- **Proof of IgE mechanism**

DIAGNOSIS OF FOOD ALLERGY

- **History**
 - **Food diaries**
 - **Elimination diets**
 - **Double -Blind Placebo- Controlled Food Challenge (DBPCFC)**
 - **DBPCFC is the Gold Standard!!**
- **Skin prick Test**
- **Radio Allergo Sorbent Test (RAST)**

SYMPTOMS OF FOOD ALLERGY

Non IgE mediated allergy Reactions

- **Cell mediated reactions**
 - **Celiac disease**
 - **Celiac spruce or gluten sensitive enteropathy**
 - **Mal absorption of gluten**

INTOLERANCE

➤ Lactose Intolerance

- **β galactosidase enzyme deficiency**
- **Lactose is not degraded into Glucose and Galactose**
- **Abdominal cramps, gas, frothy diarrhea**
- **Asian, Hispanics, American Blacks, Jews**
- **Control/ alternatives**
 - **Remove lactose**
 - **Degrade lactose - Lactase treatment**
 - **Fermentation**

ANAPHYLACTOID REACTIONS

- **Strawberries sensitivity**
 - **Spontaneous Histamine release**
- **Favism**
 - **Glucose 6 phosphate dehydrogenase (G6PDH) deficiency**
 - **Inherited**
 - **Consumption of Fava beans /inhalation of pollen**
 - **hemolytic anemia**
 - **self limiting**
 - **affects 100 million people world wide**


ANAPHYLACTOID REACTIONS

- **Strawberries sensitivity**
 - **Spontaneous Histamine release**
- **Sulphite induced reaction**
 - **Wine, salad bar**
- **Chocolate/Aspartame (NutraSweet)**
 - **Migraine head aches, urticaria**
- **Food Color - tetrazine (Yellow #5), benzoate**
 - **Asthma**
- **Mono Sodium Glutamate(MSG)**
 - **Chinese restaurant Syndrome**

TREATMENT/CONTROL

- **Avoidance**
- **Antihistamines**
- **Epinephrine/Adrenaline (Epi pen)**

GMO and Food Allergy

- **GNO transfer new protein**
- **New protein difficult to digest**
- **Longer time in GI tract**
- **StarLink corn/ Recall of Taco shells- 2000**
- **GMO Brazil nut**  **Methionine**