

Food Allergies in a Toddler

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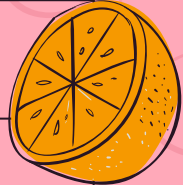
Pediatric Nutrition Care Manual



01 Introduction



What are food allergies?



Allergies

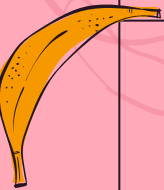
- Immune response due to proteins in certain foods¹⁻²
- Life-threatening reactions¹
- No cure, avoidance is key¹
- Autoinjectable epinephrine can be used in anaphylactic reaction events or antihistamines in milder reactions¹

- GI tract: itching (lips, mouth, throat), throat swelling, abdominal cramping/distention, diarrhea, colic, GI bleeding, protein-losing enteropathy²
- Skin: hives, swelling, eczema²
- Respiratory tract: runny/stuffed nose, sneezing, postnasal discharge, recurrent croup, chronic pneumonia, middle-ear infections²
- Systemic: anaphylaxis, heart rhythm irregularities, low BP²

Intolerances

- Digestive system localization of symptoms⁴
- Less serious symptoms⁴
- May use enzyme-removed versions of food, take enzyme pills, or be able to eat small amounts w/o reaction⁴

- Diarrhea, gas, bloating, heartburn, nausea, stomach pain, and/or upset stomach⁵



USA Food Allergies⁶



85,000,000

Americans living with life-threatening food allergies and intolerances.

377%

Increase in anaphylactic reactions treatments from food from 2007 to 2016.

Every 3 Minutes

a food allergy reaction sends to someone to the emergency room.

USA Child Food Allergies



~3%

U.S. infants develop a food allergy in their first year of life.⁶

3.4%

U.S. children with reported food allergies from 1997-1999²

5.1%

U.S. children with reported food allergies from 2009-2011²

~8%

U.S. children have food allergies as of 2023⁷

Common Food Allergens



Cow's milk

53% of US infants with food allergies in first year of life have this allergen⁶



Sesame

The 9th addition to major food allergens recognized by the USA⁹



Shellfish

Egg

High risk for developing peanut allergy⁸



Tree Nuts

Peanuts

Most common childhood food allergy in USA (1.6M)⁶



Wheat



Fish

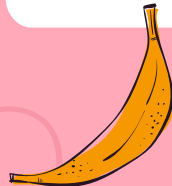
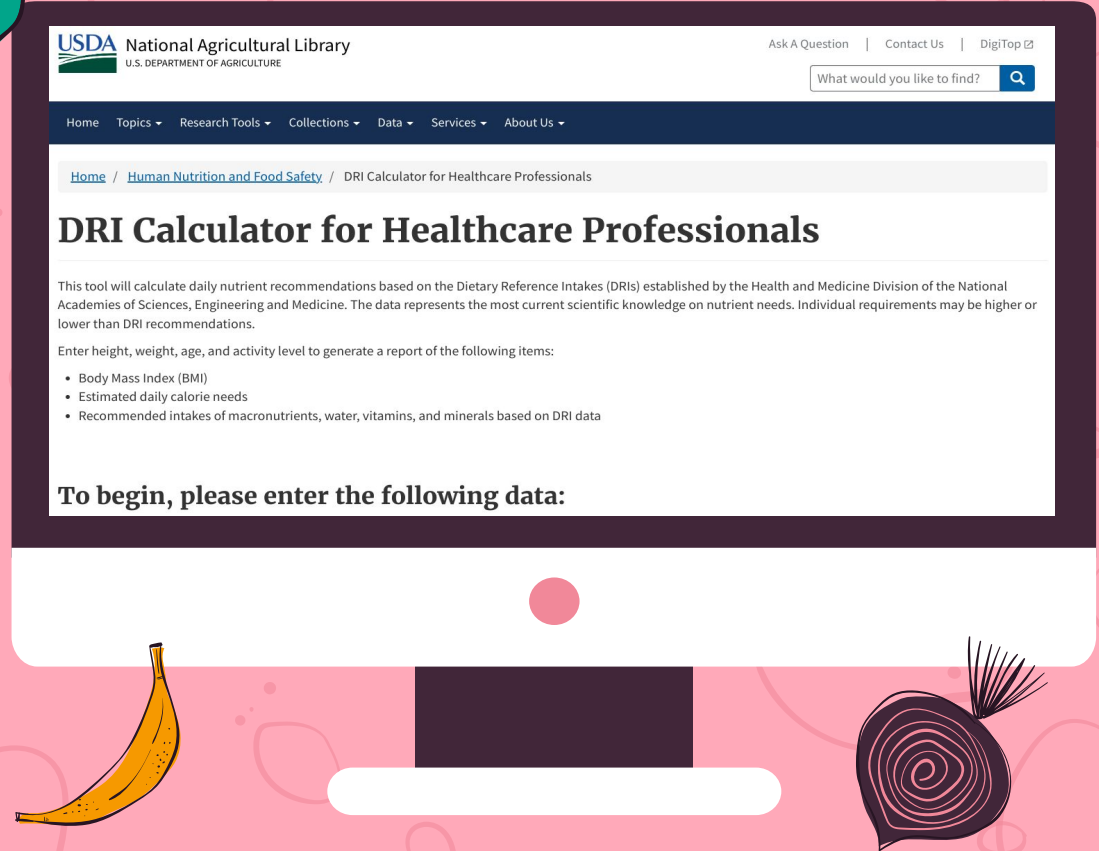


Soy

Evidence Based Guidelines



- Needs are highly dependent on age, sex, and current nutritional status.
- Use of DRI calculator¹⁷
- As a general guide the following serving sizes can be used for 12-23 month olds: 1³/₄-3 ounces of grains, 2 ounces of protein, 1 2/3-2 cups of dairy (or alternative), 2/3-1 cups of vegetables, 1/2-1 cup of fruit, and 2 tsp of healthy fats.¹¹

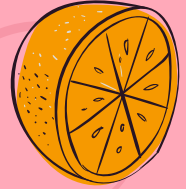
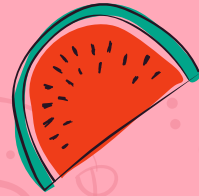




02

Case

Conceptualization

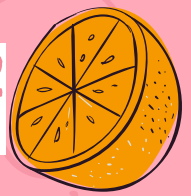




HPI²

- 14 month old boy
- Egg, milk, and peanut allergy
- No exposure to egg white, cow milk protein, and peanuts introduced prior to one year.
- Hives and eczema reaction to cow's milk and egg white.
- Peanuts discovered from allergy testing (skin).
- Lives at home with parents, 7 year old sister, and a dog

Client's Nutritional Background²



Chief Complaints

- Failing to gain weight and his weight-for-length measurement has crossed one percentile range.
- Mother states that patient has been taking longer naps and has been more irritable lately.



Allergen

- Mother has eliminated allergen foods (eggs, cow's milk, and peanuts) from the child's diet.



Substitution

- Mother has been giving rice milk because she read on the Internet that soy milk can cause boys to become feminized.
- No use of supplements or medications.



NFPE

- BP normal.
- Patient appears thin and lethargic with dark circles under eyes.



Current Intake v.s. Nutrient Goals^{2,12-16}

Food/Nutrition-Related History

The following represents his usual intake:

Meal	Time	Description
Breakfast	8 am	½ cup oatmeal made with water, ¼ cup sliced strawberries, 4 oz original (unfortified) rice milk
Snack	10 am	6 cut up grapes, 4 oz water
Lunch	Noon	2 tbs hummus with ½ pita bread, 4 oz unsweetened applesauce, 4 oz water
Snack	3 pm	4 rice wafers, 4 oz apple juice
Dinner	5:30 pm	½ cup angel hair pasta with ¼ cup tomato sauce, 4 oz original (unfortified) rice milk, ½ cup gelatin dessert
Snack	8 pm	½ cup diced canned peaches in juice, 8 oz water

Nutrient	Goal	Current Intake
Energy ¹²	721-810 kcal	775.4 kcal
Protein ¹²	11-12 g	16.6 g
Fat ¹⁷	24-32 g	11.3 g ↓
Vitamin D ¹³	600 IU or 15 mcg/d	97.6 IU or 2.44 mcg ↓
Calcium ¹⁴	700mg	402 mg ↓
Iron ¹⁵	7 mg	5.56 mg ↓
Zinc ¹⁶	3 mg	2.8 mg ↓

Additional Info



Socio-economic status & locality

Access to **local food** resources



Allergy resources

- Food Allergy Research & Education (FARE)
- American Association of Asthma, Allergy, and Immunology (AAAAI)
- Centers of Disease Control (CDC)
- How to read food labels for allergens



Allergist Results

Find out full results from allergist testing and ask to see results



03

Assessment and Diagnosis

Anthropometrics

Plot patients length, weight, age on growth charts

NFPE

→ Conduct full NFPE
→ Blood pressure WNL
→ Appears thin, lethargic, and with dark circles under eyes.



Pediatric Malnutrition



Nutritional Status¹¹

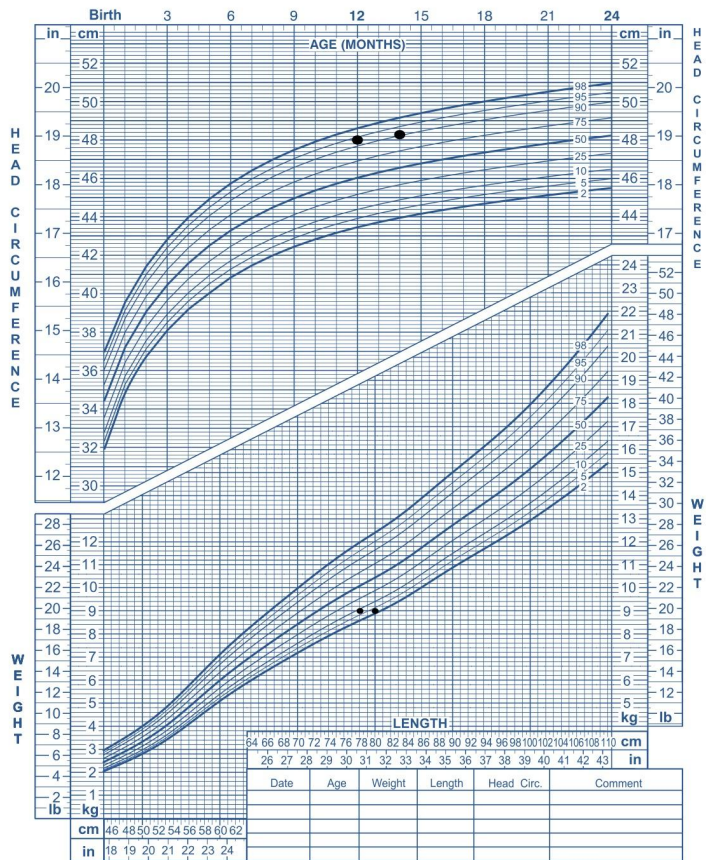
→ Deceleration in weight for length or BMI-for-age z scores
→ Inadequate nutrient intake
→ Weight gain velocity less than expected for age and sex for the child's individualized trajectory of growth and health*



Birth to 24 months: Boys
Head circumference-for-age and
Weight-for-length percentiles

NAME _____

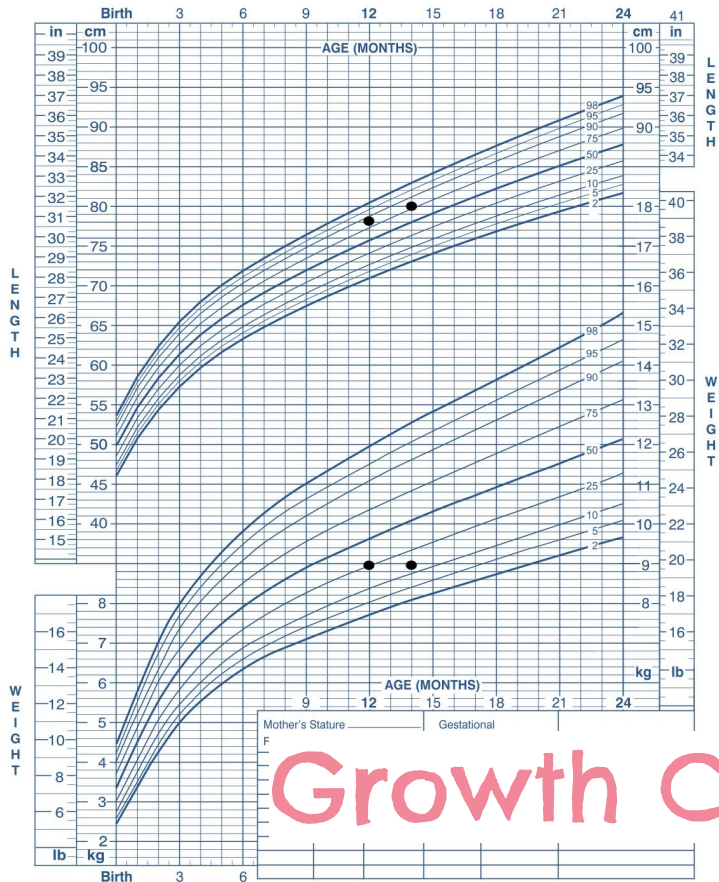
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Birth to 24 months: Boys
Length-for-age and Weight-for-age percentiles

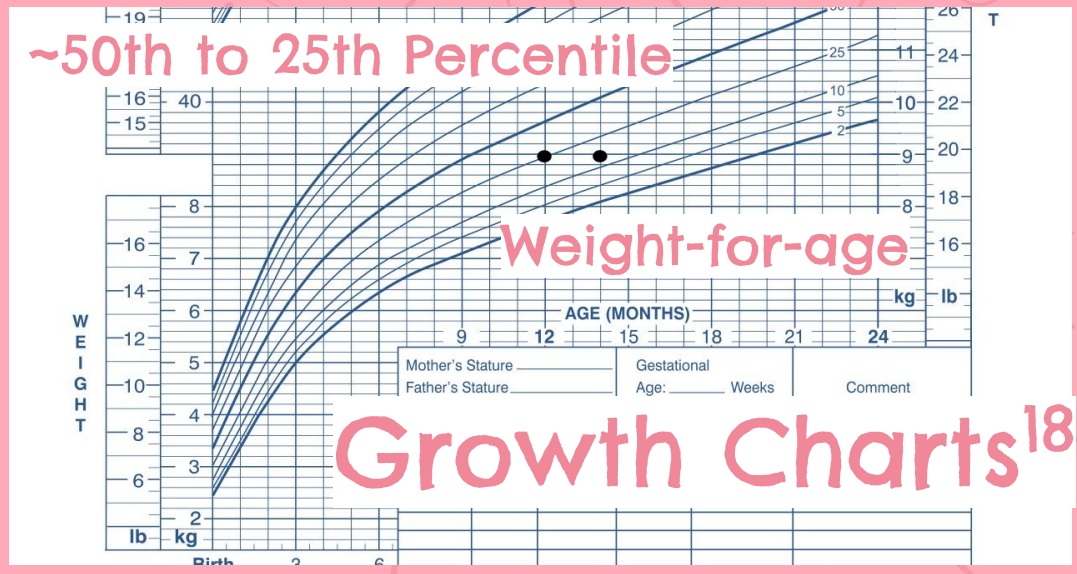
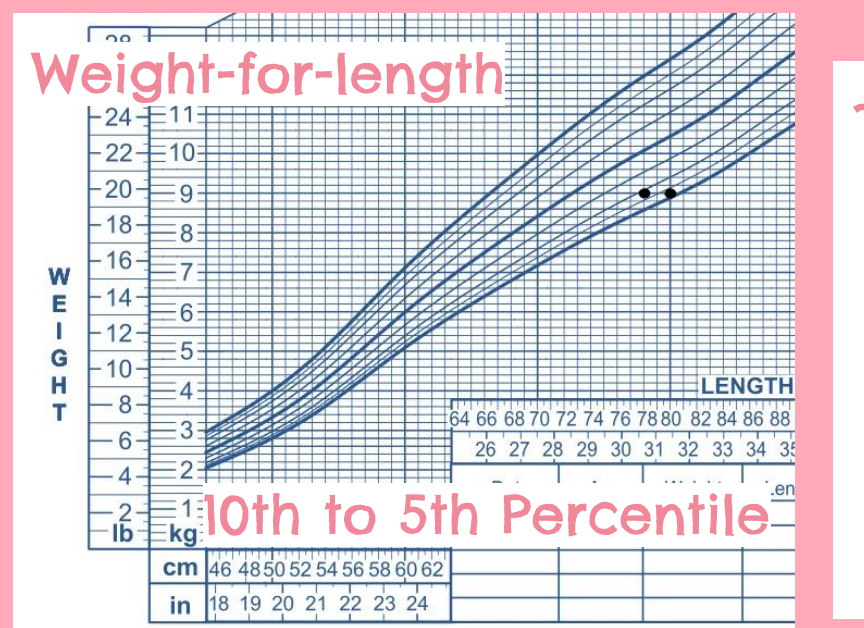
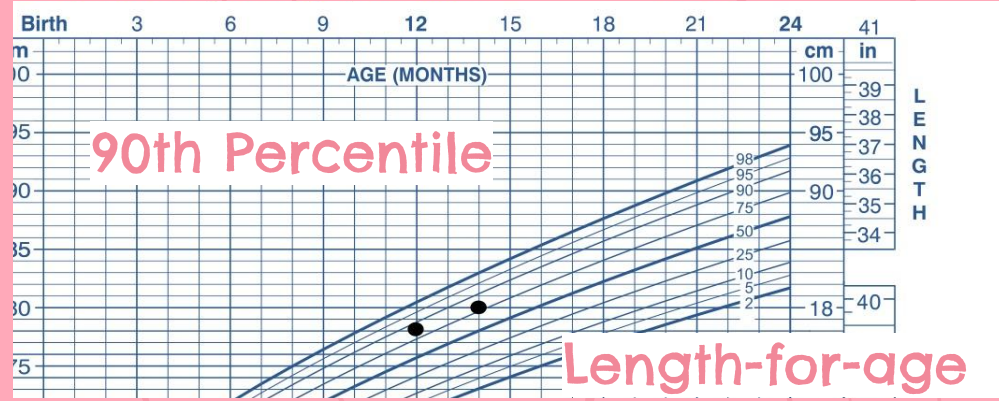
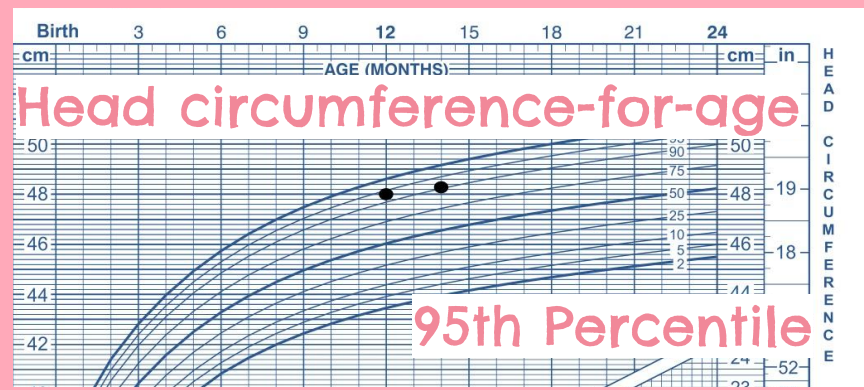
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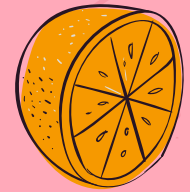
Growth Charts¹⁸





Growth Charts¹⁸

Nutrition Diagnosis: PES

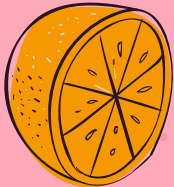
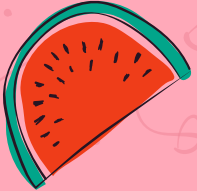


- **Inadequate fat intake** r/t food restriction due to egg, dairy, and peanut allergies aeb 11.3 g current fat intake compared to 24-32 g fat daily recommendation.
- **Inadequate vitamin intake D** r/t milk allergy food restrictions on dairy aeb 2.44 mcg current intake being 16% of needs at this life stage.
- **Inadequate mineral intake Iron** r/t peanut allergy food restriction AEB lethargy upon NFPE and mother's report of increased nap length and irritability.
- **Inadequate mineral intake Calcium** r/t milk allergy food restrictions on dairy aeb 402 mg current intake being 57% of needs at this life stage.



04

Nutritional
Interventions,
Monitoring and
Evaluation





Avoidance¹¹

- Strictly avoid all food products that contain milk, egg, and peanut allergens
- Read entire food label
- Remember manufactures may change ingredients and food preparation methods at any time
- Cognizant of cross-contamination



Varied Diet¹¹

- Lean meats and poultry, dried beans and peas, fruits, fruits, vegetables, whole and enriched grain product, and healthy oils
- Multi-vitamin use^{2,19}



New Menu

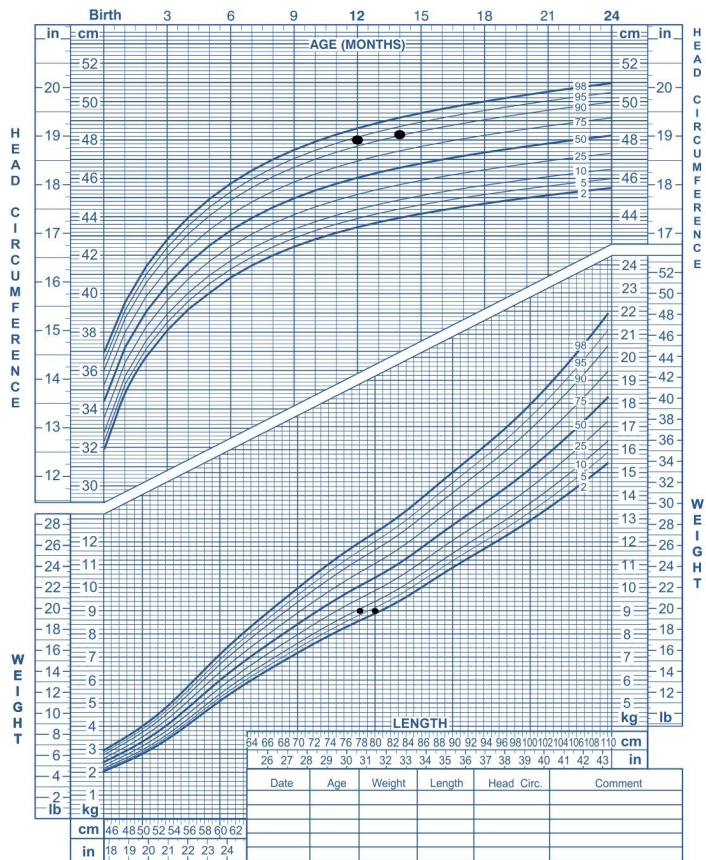
Meal	Time	Description
Breakfast	8am	½ cup fortified oatmeal made with ¼ cup fortified soy milk, and ½ cup of fortified orange juice
Snack	10am	4 large strawberries and 1 tbsp shelled, unsalted pumpkin seeds, 4 oz water
Lunch	noon	2 tbsp white bean hummus, 1 tsp olive oil, 1 oz canned salmon, ¼ whole wheat pita, 4 oz of water
Snack	3pm	¼ cup fortified orange juice, ½ cup fortified oatmeal made with ¼ cup fortified soy milk
Dinner	5:30pm	½ cup angel hair pasta, ¼ cup tomato sauce, ¼ cup mushrooms, sauteed with 1 tsp olive oil, and 4oz fortified soy milk
Snack	8pm	½ cup sugar free gelatin dessert, 8 oz water

Nutrient	New Intake
Energy	791 kcal
Protein	35g
Fat	28g
Vitamin D	612 IU
Calcium	1,266 mg
Iron	37 mg
Zinc	9.4 mg

Birth to 24 months: Boys
Head circumference-for-age and
Weight-for-length percentiles

NAME _____

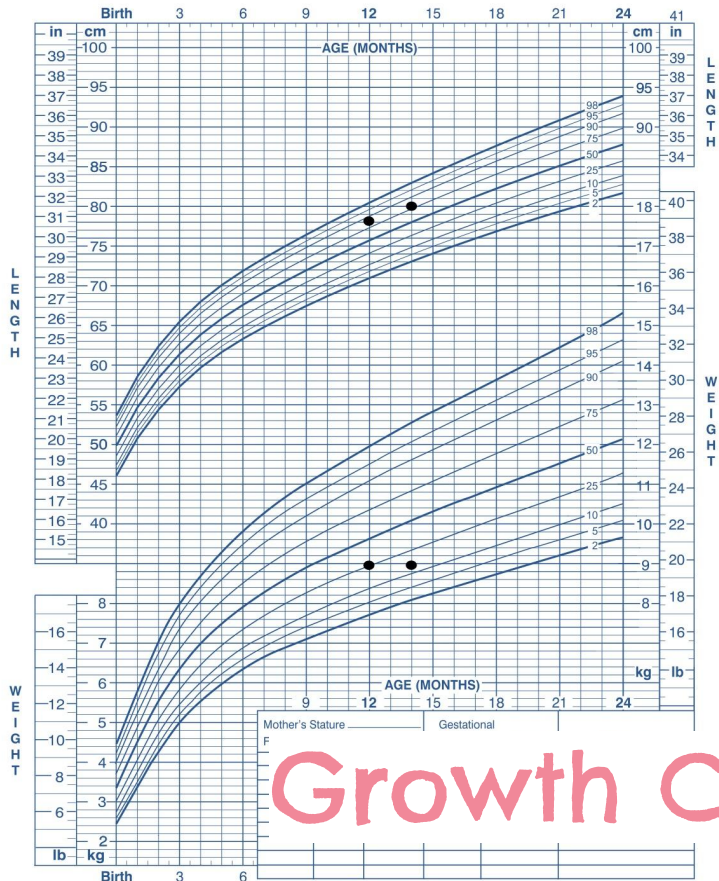
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Birth to 24 months: Boys
Length-for-age and Weight-for-age percentiles

NAME _____

RECORD # _____



Growth Charts





Special Considerations

When working with allergies in toddlers it is important to consider:

- Pre-school, babysitting, child care precautions
- Allergen-free family
- Medication use (epinephrine or antihistamines) → must be 15kg

This can depend on the patient's type and severity of allergic reactions.

Family Food Allergy Health Hx Form²⁰



Family Food Allergy Health History Form

Student Name: _____ Date of Birth: _____
 Parent/Guardian: _____ Today's Date: _____
 Home Phone: _____ Work: _____ Cell: _____
 Primary Healthcare Provider: _____ Phone: _____
 Allergist: _____ Phone: _____

1. Does your child have a diagnosis of an allergy from a healthcare provider? No Yes

2. History and Current Status

a. What is your child allergic to?

- Peanuts Insect Stings
 Eggs Fish/Shellfish
 Milk Chemicals
 Latex Vapors
 Soy Tree Nuts (walnuts, pecans, etc.)
 Other: _____

b. Age of student when allergy first discovered: _____

c. How many times has student had a reaction?

- Never Once More than once, explain: _____

d. Explain their past reaction(s): _____

e. Symptoms: _____

f. Are the food allergy reactions: Same Better Worse

3. Trigger and Symptoms

a. What are the early signs and symptoms of your student's allergic reaction? (Be specific; include things the student might say.) _____

b. How does your child communicate his/her symptoms? _____

c. How quickly do symptoms appear after exposure to food(s)? _____secs. _____mins. _____hrs. _____days

d. Please check the symptoms that your child has experienced in the past:

- Skin:** Hives Itching Rash Swelling (face, arms, hands, legs)
Mouth: Itching Swelling (lips, tongue, mouth)
Abdominal: Nausea Cramps Vomiting Diarrhea
Throat: Itching Tightness Hoarseness Cough
Lungs: Shortness of breath Repetitive Cough Wheezing
Heart: Weak pulse Loss of consciousness

4. Treatment

a. How have past reactions been treated? _____

b. How effective was the student's response to treatment? _____

c. Was there an emergency room visit? No Yes, explain: _____

d. Was the student admitted to the hospital? No Yes, explain: _____

e. What treatment or medication has your healthcare provider recommended for use in an allergic reaction? _____

f. Has your healthcare provider provided you with a prescription for medication? No Yes

g. Have you used the treatment or medication? No Yes

h. Please describe any side effects or problems your child had in using the suggested treatment: _____

5. Self Care

- a. Is your student able to monitor and prevent their own exposures? No Yes
- b. Does your student:
1. Know what foods to avoid No Yes
 2. Ask about food ingredients No Yes
 3. Read and understands food labels No Yes
 4. Tell an adult immediately after an exposure No Yes
 5. Wear a medical alert bracelet, necklace, watchband No Yes
 6. Tell peers and adults about the allergy No Yes
 7. Firmly refuses a problem food No Yes
- c. Does your child know how to use emergency medication? No Yes _____
- d. Has your child ever administered their own emergency medication? No Yes _____

6. Family / Home

- a. How do you feel that the whole family is coping with your student's food allergy? _____
- b. Does your child carry epinephrine in the event of a reaction? No Yes
- c. Has your child ever needed to administer that epinephrine? No Yes
- d. Do you feel that your child needs assistance in coping with his/her food allergy? _____

7. General Health

- a. How is your child's general health other than having a food allergy? _____
- b. Does your child have other health conditions? _____
- c. Hospitalizations? _____
- d. Does your child have a history of asthma? No Yes
 If yes, does he/she have an Asthma Action Plan? No Yes
- e. Please add anything else you would like the school to know about your child's health: _____

8. Notes:

Parent / Guardian Signature: _____ Date: _____

Reviewed by R.N.: _____ Date: _____

Conclusions

Summary:

- 14 mo boy
- Failure to gain weight, lethargy, irritability, and dark under eye circles
- Dx by allergist with food allergies to cow's milk, egg, and peanuts
- Family education
- Monitor growth and intake
- Ensure strict avoidance of food allergens

Positive

With proper education, substitutions, and avoidance of the allergen the patient can go on to lead a healthful life.

Negative

If pt/family is not careful and pt comes in contact with food allergens it can be life threatening as well as extreme avoidance of foods can cause deficiencies.²¹





Thanks!

Presented by
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Resources

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