

Is My Patient Growing & Meeting Her/His Nutritional Needs or Just Growing



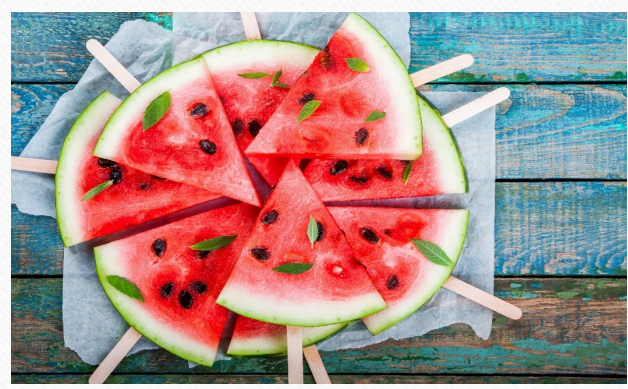
Disclosure

- I have no relevant financial relationships with the manufacturers(s) of any commercial products(s) and/or provider of commercial services discussed in this CME activity
- I do not intend to discuss an unapproved/investigative use of a commercial product/device in my presentation.

Learning Objectives

- **Target audience:** Pediatricians, family practitioners, nurse practitioners
- **Objective:** To increase provider knowledge of how to meet the nutritional needs of pediatric and adolescent patients in order to maximize growth potential using family-centered, best practice interventions and care.

When you think about food, what comes to mind?



A photograph of a family of four in a kitchen. A man in a white t-shirt stands in the background, looking down at a young girl in a pink and white striped shirt who is holding a large black pot filled with vegetables. To her right, another young girl with curly hair in a grey shirt is cutting vegetables on a cutting board. The kitchen is bright and modern, with white cabinets and a dining table in the background. The text "When thinking about the nutritional needs of your patient" is overlaid in white serif font, underlined.

When thinking about the
nutritional needs of your patient



Growth

Sufficient Energy & Nutrients to promote

- Physical growth
- Cognitive Development
- Social and emotional growth
- Developmental milestones
- Immunity
- Positive Feeding experience

Nutrition





Fruits

Grains

Vegetables

Protein

Dairy

MyPlate.gov

If you need 1500 Calorie to meet your energy needs for growth it could be achieved by
and/or



What are we lacking when it is or.....

Fruit

vegetables

Protein

Grains

Dairy

- Micro- nutrients like Vitamin C, Vitamin A, calcium, Vitamin D, phosphorus, low Vitamin E
- Fiber to help support a maturing gastrointestinal tract
- Omega 3 (higher Omega 6 & 9 intake interferes with omega 3 absorption)
- Diversity of nutrients & protective factors from whole grains, vegetables, fruits

“

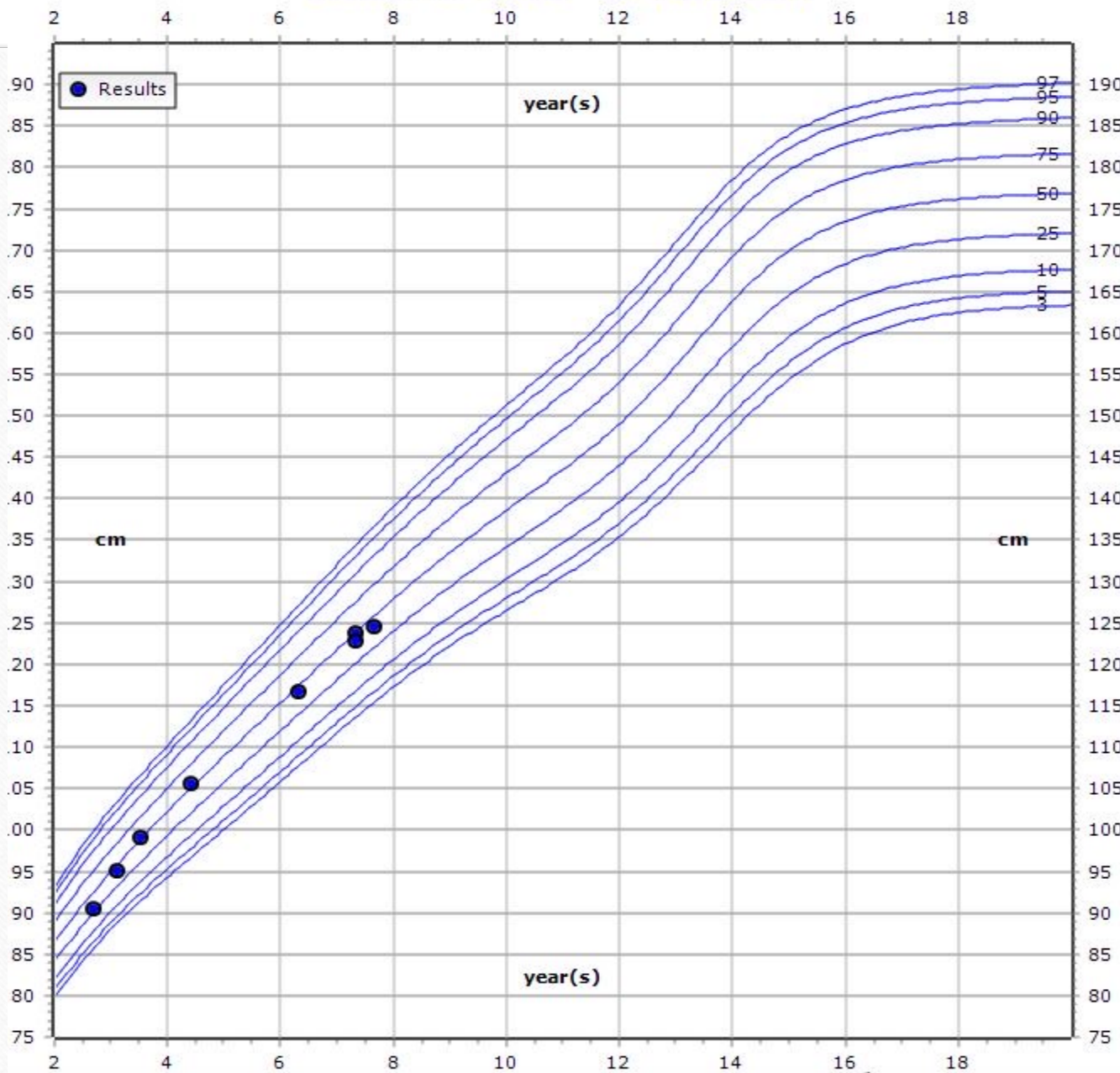
According to the CDC, growth charts are not intended for use as a sole diagnostic instrument but contribute to the formation of an overall clinical impression of the child being assessed.

”

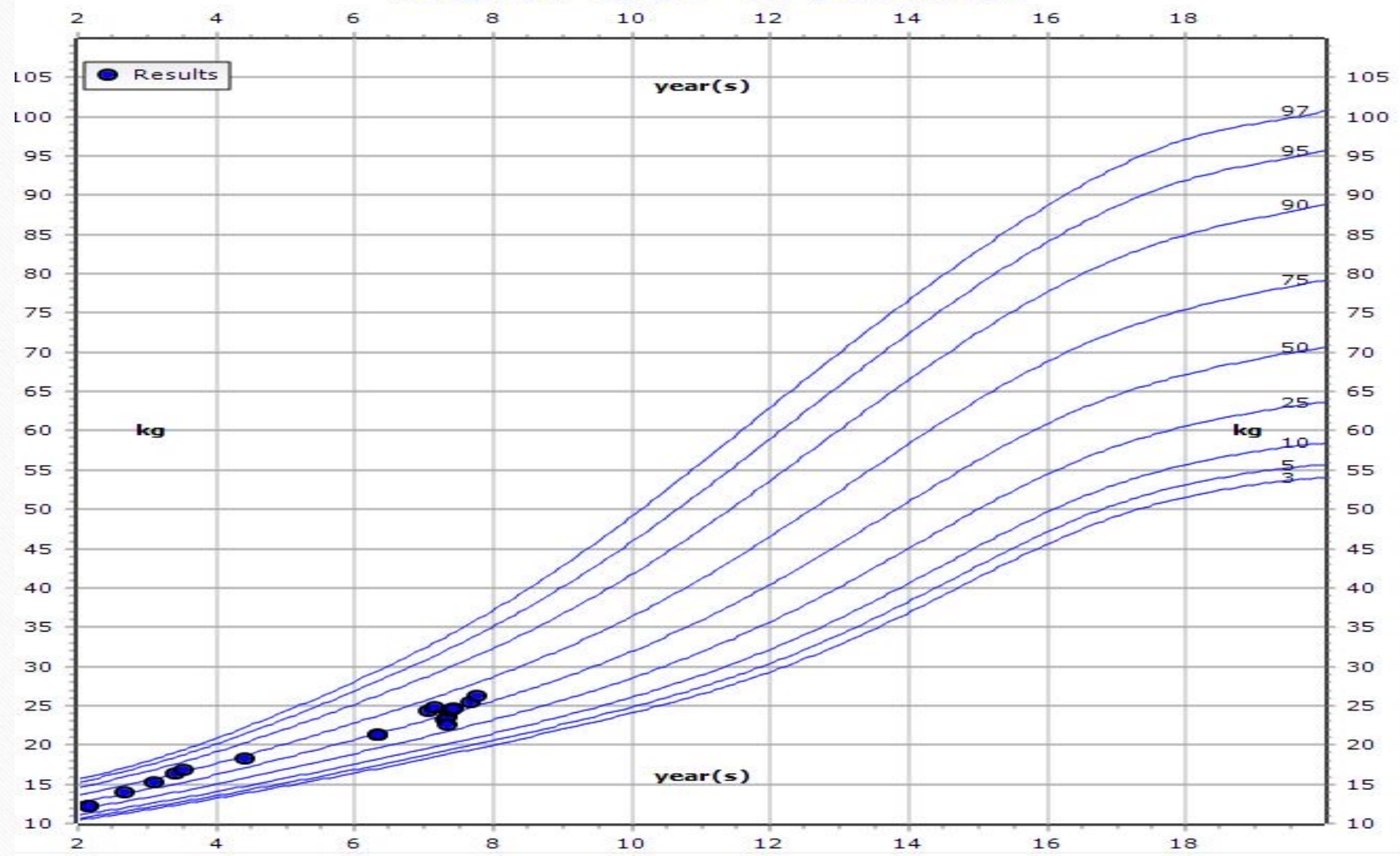
Nutrition in Clinical Practice, February 2015.

Weight, Height, BMI are one indicator in the assessment of a child they are not a marker of health.

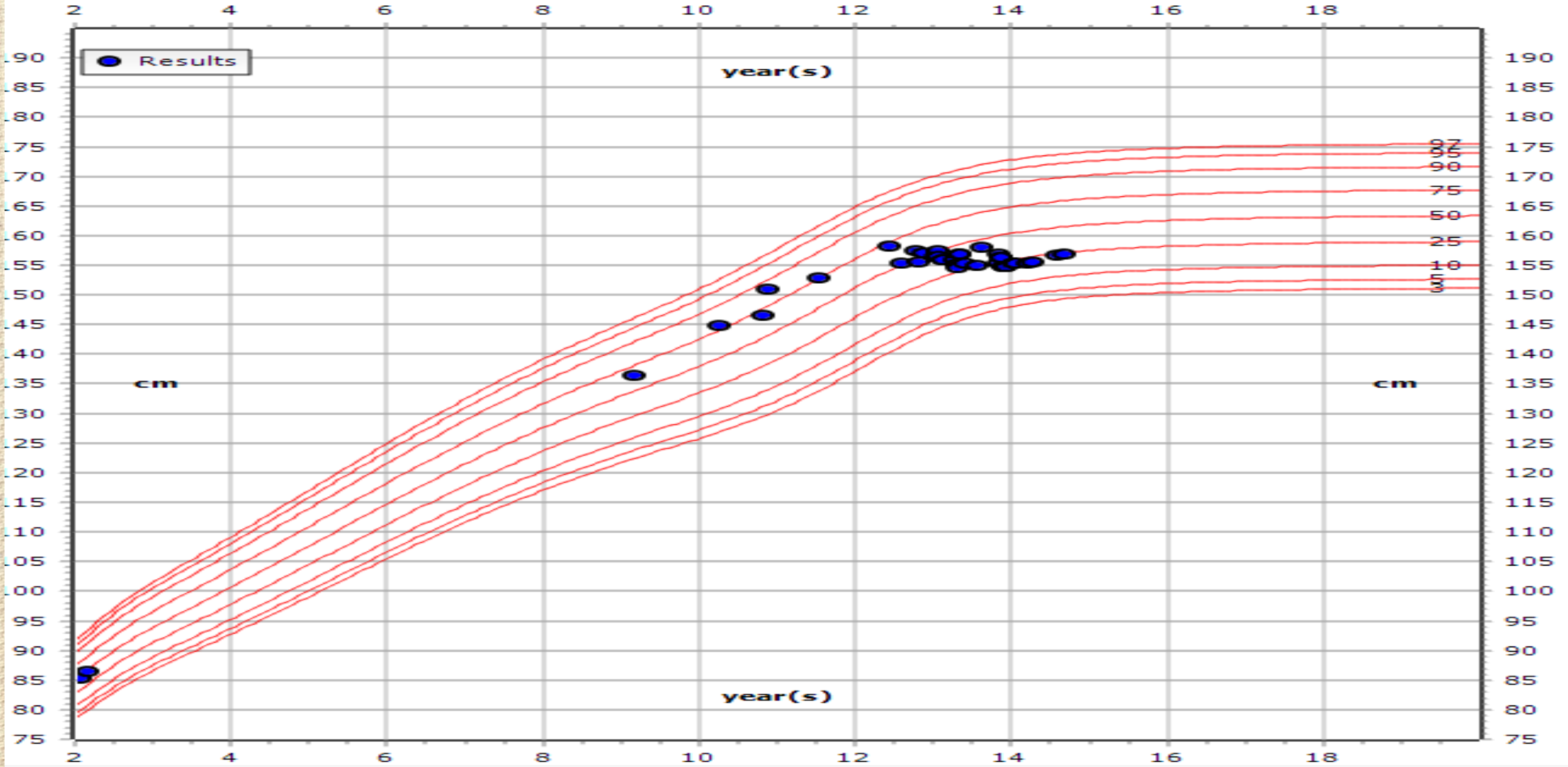
Stature-for-age, 2 - 20 years, Boys



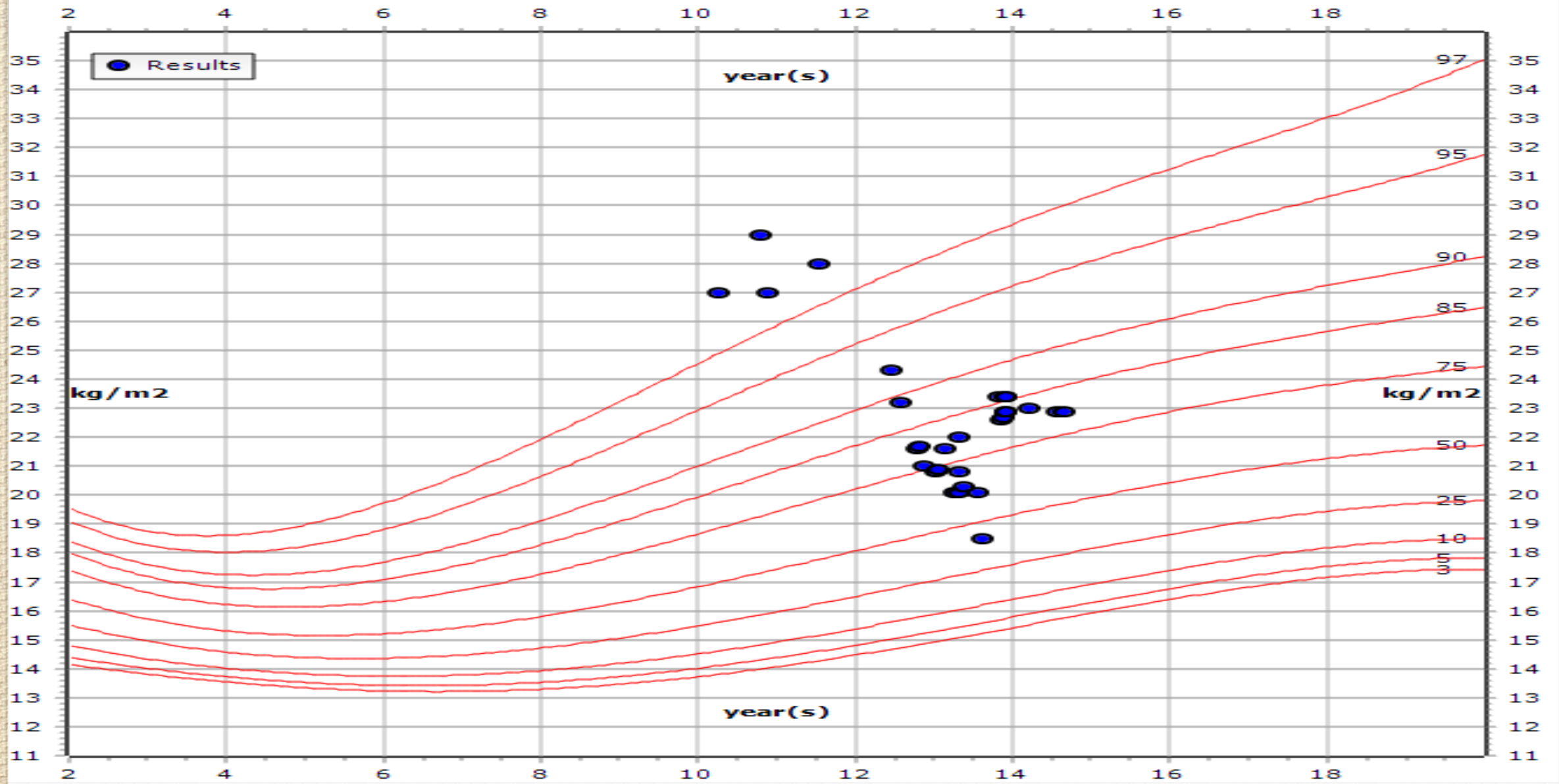
Weight-for-age, 2 - 20 years, Boys



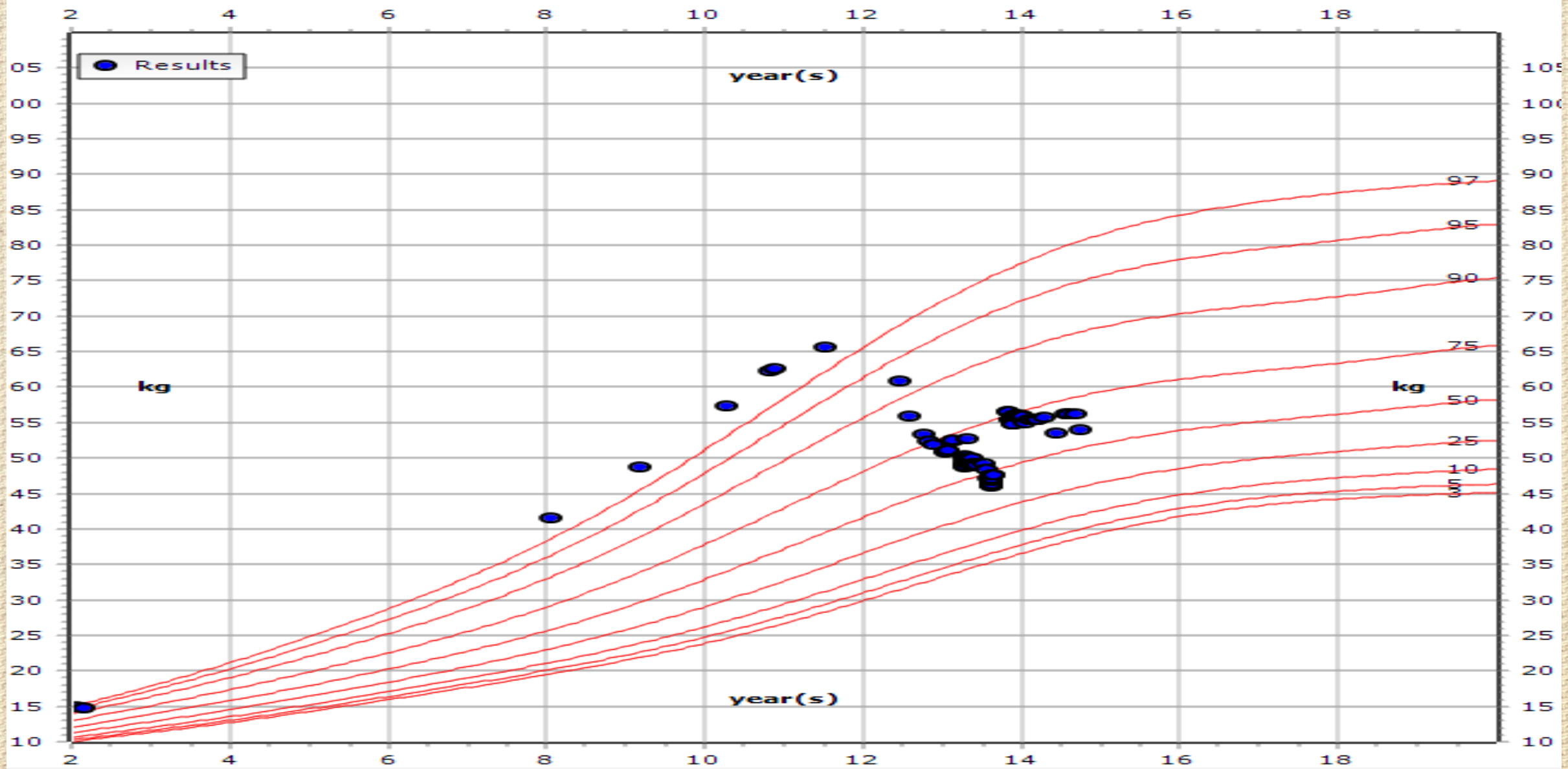
Stature-for-age, 2 - 20 years, Girls



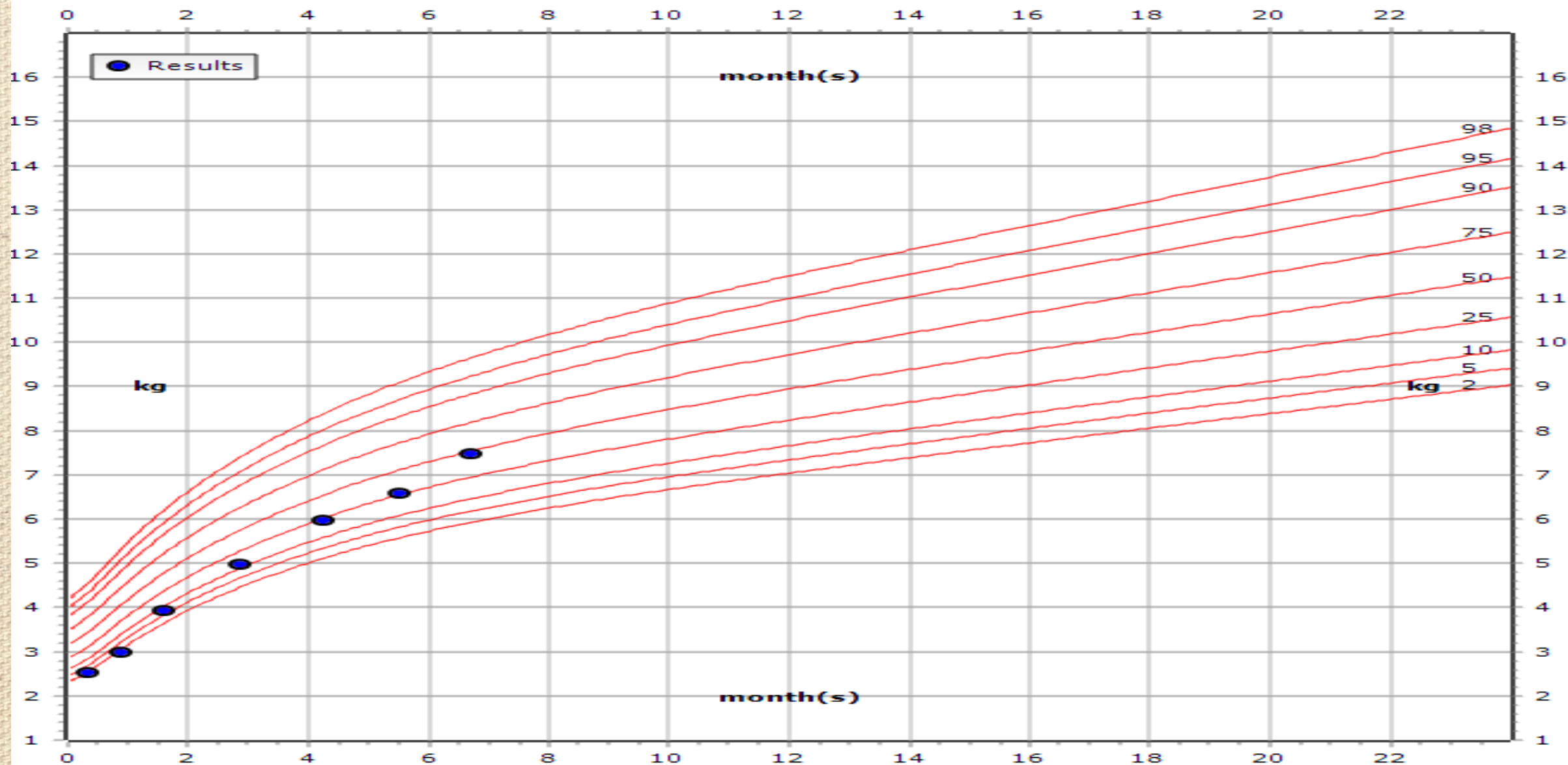
BMI-for-age, 2 - 20 years, Girls



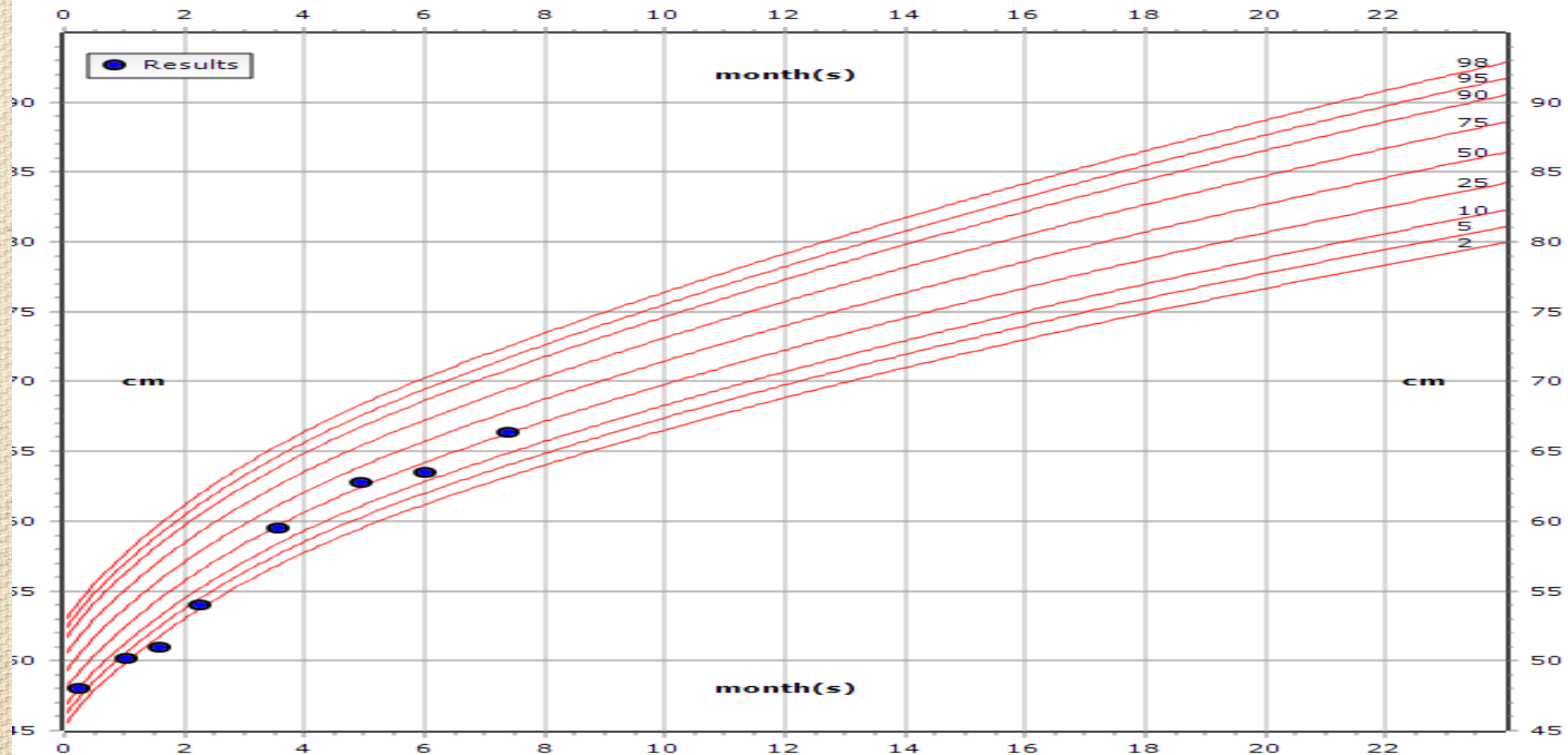
Weight-for-age, 2 - 20 years, Girls



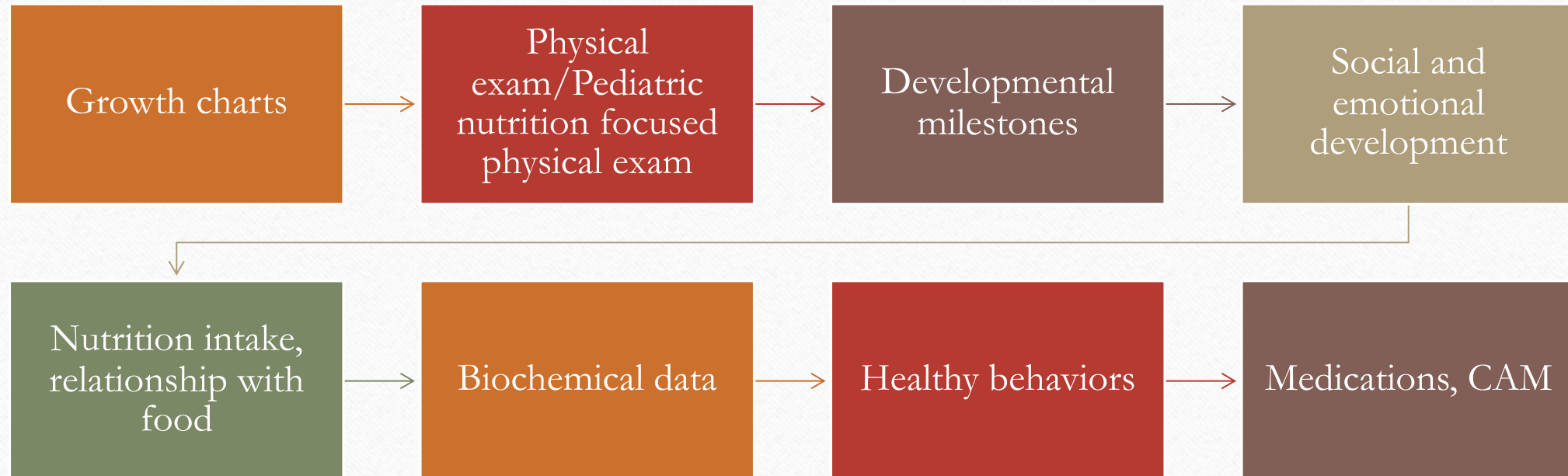
WHO Weight-for-age, 0-2 years, Girls



WHO Length-for-age, 0-2 years, Girls



Developing the Whole Clinical Picture



When to Dig Deeper

- I want to be healthier
- My child does not sit for meals
 - Fluids are no problem
 - We eat very healthy
- Parental concern about weight vs overall growth
 - Overwhelmed parents



6 Questions to Ask from Feeding Matters Screener

Addressing the 4 domains of Pediatric Feeding Disorder



1. Does your baby/child let you know when he/she is hungry?
2. How many minutes does it usually take to feed your baby/child?
3. Do you have to do anything special to help your baby/child eat?
4. Does your baby/child let you know when he/she is full?
5. Do you think your baby/child eats enough?
6. Based on the questions above, do you have concerns about your baby/child's feeding?

What does the dinner table look like with a child who has ASD..

- 80% of families report experiencing feeding issues at mealtimes
- Food Selectivity/refusal looks like a narrower range of foods/brand specific-limiting family's ability to share a meal
- Difficulty progressing to age-appropriate foods due to oral-motor delays associated with chewing & swallowing or texture issues- drinking from a bottle at 3yrs of age, pureed foods at 7 yrs. or finger foods at 15 yrs.
- Preference for processed foods due to desire for sameness lack important micronutrients such as calcium, iron & Vitamin C leading to poor bone health & malnutrition.

Autism

- Co-morbid conditions associated with ASD- sleep issues, feeding issues, constipation, seizures, behavioral issues, ADHD
- Readiness of family to address feeding issues.
- Resources within community- Dr Kristin Sohl (UMHC-SPMB & ECHO Autism), Dr. Brett Moore, Dr Alexandra James (UMHC-SPMB), Thompson Center, RDNs at UMHC, Easter Seals, UCP Heartland, Children's Therapy Center, Therapy Unlimited.
- Lab work- CBC, CMP, ferritin, Vit D, B12, folate, zinc, Vit C
- Follow up on issues yearly with labs, question to assess progress with feeding, therapy.

Nutrition related Resources

1. Exploring Feeding Behavior in Autism Tool Kit by Autism Speaks (ATN)
2. ECHOAutism.org
3. Women, Infant and Children Supplement Program (WIC)
4. First Steps (Birth to Three program)- nutrition
5. Local Registered Dietitian's
 - Hospital
 - Outpatient Setting
 - Private Consulting
 - Early Intervention Programs/Early Childhood Special Education

Feeding Clinics and Therapy Resources within Missouri

1. Childrens Therapy Center, Columbia- 573-882-7350
2. Leffen Center for Autism Feeding Clinic, Joplin-417-347-7850
3. Thera-Peds, Sullivan- 573-468-3373
4. Northeast Therapy Services, Kirksville-660-785-1834
5. TherCare, Springfield-417-890-4656
6. Children's Mercy, Kansas City-816-760-8853
7. Playabilities for Sensational Kids, Shawnee Mission KS-913-948-4223
8. Bricks & Bites Feeding therapy, St. Louis- 314-666-0612
9. Maryville University Speech & Language clinic, St Louis- 314-529-9205

Weight Concerns

- BMI and weight are not markers of health nor adequate nutrition
- Weight loss in childhood and adolescent is a sign to dig deeper or referred to RDN
- Understand our own bias with regards to weight
- Increase awareness related to weight neutral care through the Health at Every Size model by the Association for Size Diversity and Health.

What does Weight Neutral Care Look like...

- Focus on lifestyle behaviors vs weight loss
- Eating well- based on individual needs, appetite, pleasure, hunger/fullness
- Joyful movement- engage in enjoyable movement to the degree they choose
- Advocating that health and wellbeing can not be defined by BMI, weight
- Respectful care

Disordered
Eating,
Eating
Disorders

The rate of Eating Disorders in adolescents is increasing

Important to have tools for screening

Resources within community for referral

Language

Lab work- does not reflect significance of disease state

Eating Disorder Resources

- Adolescent medicine physicians at UMHC- Dr Melissa Lawson, Dr Aneesh Tosh
- RDN with eating disorder experience at the UMHC- Sheila Chapman, MS, RDN, Ginger Meyer, MS,RDN, Anna Kellner, MS,RDN
- Bamboo Nutrition- Isabelle Bouchard, MS,RD, Laura Rende, RDN
- Kind Body Collaborative therapists and group classes
- Dr. Stephanie Bagby-Stone, MD, psychiatry

Conditions That Have Negative Impact On The Feeding Environment/Appetite

- Stress at mealtimes- fighting, bargaining with food/take one bit
- Diet culture- talking about dieting, focus on weight, misinformation shared about food, negative comments re: bodies
- Chronic disease
- Stimulate medications
- Anxiety, depression
- Lack of schedule for meals, snacks
- Fluid intake

Foundations That Support Hunger Drive and Positive, Safe Feeding Environment

- Established meal & snack times
- Preserve hunger drive by elimination of grazing, excessive fluid intake
- Neutral language
- Social interaction- time to teach table manner, social cues, peer influences
- Allowing child to explore foods- taste, texture, touch- does not necessarily include chewing and swallowing.
- Discussion about the food vs what to do with food
- Sharing stories, experiences
- Appropriate seating and time frames

Consider these phases.....

- We need them to gain weight so whatever they will eat give it to them
- Whenever they are hungry feed them
- When they are hungry, they will eat

Ways to Increase the Nutrient Density of Foods without a Increase in Volume or Change to Preferred Foods

- Use of heavy whipping cream, whole milk, canned coconut milk, cream soups, sweetened condensed milk (replace any low-calorie liquid in recipe)
- Avocado, hummus, nut butters, ranch dressing/dressing with oil (uses as dips, spreads)
- Oil, butter, margarine
- Alfredo/cream sauce, gravies, pesto, curries, cheese sauce
- Use of full fat dairy (check)- cheese, cottage cheese, ice cream, whole milk
- Milk shakes, smoothies, hot chocolate (half milk & cream topped with marshmallows)
- Baked goods with protein added (Kodiak brand) or added nuts/seeds/dried fruit
- Cereal with added dried fruit, nuts, seeds (granola, Kellogg's)

Add it! 315 kcal- no change to volume nor food

- Breakfast: Adding $\frac{1}{4}$ cup whole milk/cream to hot/cold cereal = 37 kcal
- Am snack: 1 tbsp peanut butter/nut butter to handful of goldfish = 90 kcal
- Lunch: 1 tsp of butter to cooked vegetable = 50 kcal
- Pm snack: 1 tbsp of canned coconut milk added to 4 oz almond milk = 30 kcal
- Dinner: $\frac{1}{4}$ cup shredded cheese added to mac n cheese serving = 110 kcal

Tip- remember to add calorie source to child's portion not to the dish

Strategies to
Support
Intake of
Foods while
Using
Supplements

Scheduled meals & snacks- 3 meals, 3 snacks per day

Monitor fluid intake to include supplement use

Use of supplements after foods/snack times. Optimal time- HS

Offer nutrient dense foods followed by supplement

Start with foods top with dessert type foods/supplement

Supplements

- Pediasure 1.0 & 1.5
- Boost Kids Essentials 1.0 & 1.5
- Kate Farms Pediatric standard 1.2
- Carnation Instant Breakfast
- Ensure Clear
- Boost Breeze
- Supplement current intake
- No food allergies or intolerances
- Good source of protein, CHO
- Covered by insurance
- Convenient
- Samples can be shipped to home

Supplements for Intolerances, Food Allergies & GI issues

1. Peptamen Jr, Alfamino infant & Jr
2. Pediasure Peptide
3. Kate Farm Pediatric Peptide 1.0 & 1.5, Pediatric Standard 1.2, Standard 1.0, 1.4, Standard Peptide 1.0, 1.5
4. Neocate Infant, Jr
5. Boost Breeze, Neonate Splash
6. Similac Soy, Alimentum
7. Progestimil

Elemental Formulas for CMPA, Multiple Food Allergies, GI Issues

- Alfamino Infant & Jr
- Neocate Infant & Jr
- Elecare Infant & Jr
- Puramino

PUT YOUR MONEY ON MILK.

Dollar for dollar, cost per cup, no other beverage comes close to offering the same nutrients as real milk. Why pay **two or three times the cost of milk** for added ingredients, flavor and less nutrition? Milk's complete package gives it all to you — naturally — **for a fraction of the cost.**

Every glass of real milk gives you **high quality protein — with all 9 essential amino acids—and natural calcium.** No matter what brand or type of real milk, the nutrients present stay the same. Alternative beverages vary in nutrient quality and quantity from one brand to the next, with no guarantee of which vitamins or minerals may be present. **Milk is consistent, every time.**



WHICH GLASS IS THE BEST DEAL?

REAL MILK	SOY BEVERAGE	ALMOND BEVERAGE	COCONUT BEVERAGE	OAT BEVERAGE	PEA BEVERAGE
Calcium Phosphorus Protein Niacin Riboflavin Vitamin A Vitamin B5 Vitamin B12 Vitamin D	Calcium Magnesium Phosphorus Protein Riboflavin Vitamin A Vitamin B12 Vitamin D	Calcium Vitamin A Vitamin D Vitamin E	Calcium Vitamin A Vitamin B12 Vitamin D	Calcium Riboflavin Vitamin A Vitamin B12 Vitamin D	Calcium Potassium Protein Vitamin A Vitamin B12 Vitamin D

MILK MYTHS: FACT VS. FICTION

1

MYTH: It's easy to get calcium without dairy foods like milk.

FACT: Dairy foods are the top source of calcium for Americans. It's difficult to get the calcium you need without them! That's because dairy foods, like milk, **contain the most calcium and in a form that's easy for your body to use.** It is harder for your body to use calcium from non-dairy foods like milk alternatives.

2

MYTH: People who are sensitive to lactose should avoid milk.

FACT: If you start with a small amount of milk daily and increase slowly over several days or weeks, you may build your tolerance. Or choose lactose-free milk. It is real milk, just without the lactose, and it provides the same nine nutrients that regular milk does.

3

MYTH: All milk contains hormones and antibiotics, except organic milk.

FACT: All milk is antibiotic free. It is strictly tested, both on the farm and at the processing plant. Any milk that tests positive for antibiotics at any point is immediately disposed of and does not get into the food supply. All milk, even organic, naturally has a small amount of hormones, which are broken down during pasteurization and the normal digestive process.

www.stldairyCouncil.org

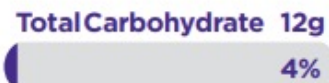


Low-Fat Milk

Serving size: 8 oz.

Calories 100

% Daily Value



Added Sugar: No



Ingredients: LOW-FAT MILK, VITAMIN A, VITAMIN D

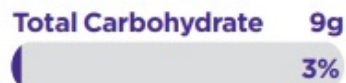


Soy Beverage

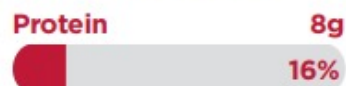
Serving size: 8 oz.

Calories 105

% Daily Value



Added Sugar: Yes



Ingredients: WATER, SOYBEANS, CANE SUGAR, TRICALCIUM PHOSPHATE, CALCIUM CARBONATE, VITAMIN A PALMITATE, VITAMIN D2, DIBOCLAVIN, VITAMIN B12, SEA SALT

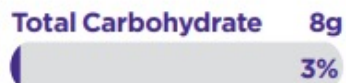


Almond Beverage

Serving size: 8 oz.

Calories 60

% Daily Value



Added Sugar: Yes



Ingredients: WATER, ALMONDS, CANE SUGAR, CALCIUM CARBONATE, VITAMIN E ACETATE, VITAMIN A PALMITATE, VITAMIN D2, SEA SALT, CELLULOSE, SUNFLOWER LECTIN

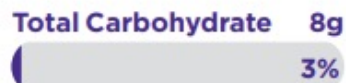


Coconut Beverage

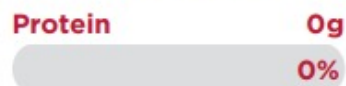
Serving size: 8 oz.

Calories 70

% Daily Value



Added Sugar: Yes



Ingredients: WATER, COCONUT CREAM, CANE SUGAR, CALCIUM PHOSPHATE, VITAMIN A PALMITATE, VITAMIN D2, VITAMIN B12, SEA SALT, NATURAL FLAVOR, SUNFLOWER



Oat Beverage

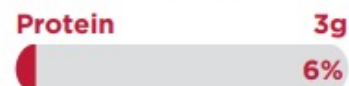
Serving size: 8 oz.

Calories 130

% Daily Value



Added Sugar: No



Ingredients: WATER, OATS, SUNFLOWER SEED OIL, TRICALCIUM PHOSPHATE, POTASSIUM PHOSPHATE, CALCIUM CARBONATE, SEA SALT, CELLULOSE, VITAMIN A

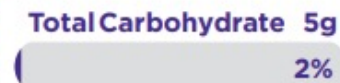


Pea Beverage

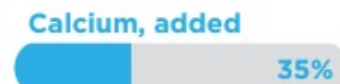
Serving size: 8 oz.

Calories 90

% Daily Value



Added Sugar: Yes



Ingredients: WATER, PEA PROTEIN, CANE SUGAR, SUNFLOWER OIL, VITAMIN A PALMITATE, VITAMIN D2, VITAMIN B12, TRICALCIUM PHOSPHATE, POTASSIUM

References

- 1. Nutrition in clinical practice, volume 30 #1, February 2015.
- Leader, G., Tuohy, E., Chen, J.L. *et al.* Feeding Problems, Gastrointestinal Symptoms, Challenging Behavior and Sensory Issues in Children and Adolescents with Autism Spectrum Disorder. *J Autism Dev Disord* **50**, 1401–1410 (2020).
<https://doi.org/10.1007/s10803-019-04357-7>
- Lily O’Hare, Jane Taylor. What Wrong with the “War on Obesity?”. Sage, April-June 2018
- Feedingmatter.org
- EllynSatter.institute.org



QUESTIONS