

Real Facts About Real Dairy in School Meals

Thank You for Being Our Heroes!



Webinar Housekeeping

- You are muted
- Write questions in the Q&A box
- Evaluation and CPE certificate will be emailed after the webinar
- Stay connected by following @NewEnglandDairy





Welcome & Introductions

School Meal Pattern Background

Dairy Nutrition Overview

Encouraging Dairy Consumption in Schools

Questions & Next Steps

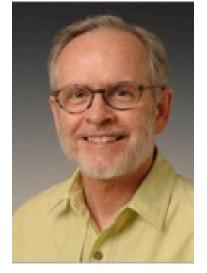
Today's Presenters



Amanda Aldred, RD, SNS New England Dairy



Becca Story, MS, RD, LD New England Dairy





Robert Murray, MD The Ohio State University Murray MD Nutrition LLC Dayle Hayes, MS, RD Nutrition for the Future, Inc. School Meals That Rock

Learning Objectives

- Explain the nutrient contributions of dairy in the diet and why it is included in the school meal patterns.
- Describe the nutritional differences between milk, lactose-free milk, and dairy alternative beverages.
- Identify strategies to encourage consumption of milk and dairy foods in school meal programs.

Suggested SNA Learning Codes

- 1310/1320 General Nutrition
- 4150/4160 Communications & Marketing

Why do we serve that? School Meal Pattern Background Becca Story, MS, RD, LD

Poll Questions: Essential nutrients are those your body cannot make on its own.

a) True b) False

US Dietary Guidelines for Americans

- Nutrition foundation for federal programs like the National School Lunch and School Breakfast Programs
- Dairy Recommendations
 - 2-3 cup servings of low-fat or fat-free dairy for children 2-8 years old depending on calorie needs
 - 3 servings of low-fat or fat-free dairy for children 9 years old and older
- Revised every 5 years

U.S. Dietary Guidelines for Americans Process



Dietary Guidelines for Americans

dietaryguidelines.gov

Are we meeting the Dietary Guidelines?

Monitoring

- National Health and Nutrition Examination Survey (NHANES)
- What We Eat in America (WWEIA)
- Youth Risk Behavior Survey (YRBS)

Healthy Eating Index

• Snapshot of how well Americans are meeting nutrition recommendations.



Nutrients Defined

 Essential Nutrient- Nutrient required for normal body functioning that can't be synthesized at all by the body in large enough quantities and must be consumed through the diet.

Nutrient of Concern-

Nutrients that Americans don't get enough of in the average diet.

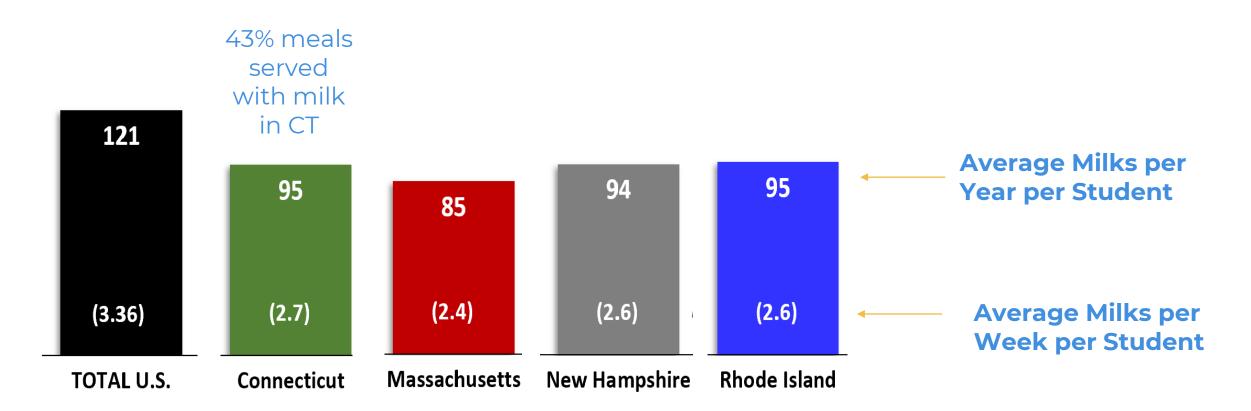


Poll Question: On average, children over 5 years of age

a) Don't drink enough milkb) Drink enough milk

c) Drink too much milk

School Milk Consumption in New England



*Meal sales information only available in CT. Milk sales information not available for VT.

Poll Question: The nutrients of concern are Calcium, Potassium, Vitamin D, and Fiber.

Which does dairy provide?

a) Potassium, Calcium, & Vitamin Db) Fiber, Calcium, & Vitamin Dc) All of the above.

Lucky 13 Dairy nutrition overview Robert Murray, MD

The Dietary Guidelines for Americans A Quality Dietary Pattern = Good Health



 Infection **Heart Disease** •Stroke Diabetes Obesity Hypertension Metabolic diseases Osteoporosis •Cancers Alzheimer's •Mental Health



A Healthful Diet Pattern

- Plant oils
- Fish & seafood
- Lean meats
- Legumes
- Nuts & seeds
- Vegetables
- Fruits and 100% juices
- Dairy & yogurt
- Whole grains
- Wine
- Dark chocolate
- Coffee



Dietary Patterns are personal preferences, experiences, culture. Improvements are *incremental*

Dairy in International Dietary Guidelines

- 100 countries have written food-based dietary guidelines
- All recommend a balance of animal and plant sourced foods
- All suggest fruits, vegetables, cereals, legumes, nuts, milk and dairy, meat and derivatives, fish, eggs, water, and oils.





Measuring Diet Quality

https://www.cnpp.usda.gov/healthyeatingindex

Component	Maximum points	Standard for maximum score	Standard for minimum score of zero
Adequacy:			
Total Fruits ²	5	≥0.8 cup equivalent per 1,000 kcal	No Fruit
Whole Fruits ³	5	≥0.4 cup equivalent per 1,000 kcal	No Whole Fruit
Total Vegetables ⁴	5	≥1.1 cup equivalent per 1,000 kcal	No Vegetables
Greens and Beans ⁴	5	≥0.2 cup equivalent per 1,000 kcal	No Dark-Green Vegetables or Legumes
Whole Grains	10	≥1.5 ounce equivalent per 1,000 kcal	No Whole Grains
Dairy ⁵	10	≥1.3 cup equivalent per 1,000 kcal	No Dairy
Total Protein Foods ⁴	5	≥2.5 ounce equivalent per 1,000 kcal	No Protein Foods
Seafood and Plant Proteins ^{4,6}	5	≥0.8 ounce equivalent per 1,000 kcal	No Seafood or Plant Proteins
Fatty Acids ⁷	10	(PUFAs + MUFAs) / SFAs ≥2.5	(PUFAs + MUFAs)/SFAs ≤1.2
Moderation:			
Refined Grains	10	≤1.8 ounce equivalent per 1,000 kcal	≥4.3 ounce equivalent per 1,000 kcal
Sodium	10	≤1.1 grams per 1,000 kcal	≥2.0 grams per 1,000 kcal
Added Sugars	10	≤6.5% of energy	≥26% of energy
Saturated Fats	10	≤8% of energy	≥16% of energy

2-5 yr olds: 59.9

6-11 yr olds: 53.7 12-17 yr olds: 52.3

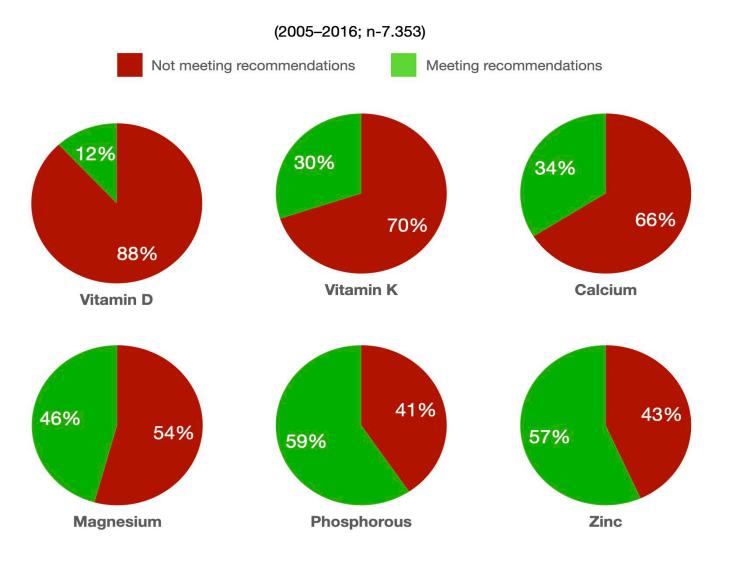
>65 yrs: 68

Adolescent Nutrition is critical to future health

- Puberty impacts organ refinement, physiology, body composition, and metabolism
- 20% of final height
- 50% of adult weight
- 40% bone mass
- Brain reorganization/ social-emotional growth
- Establish their personal identity, values, and beliefs



U.S. 9-15 years old: Key Nutrients



Nutrition Study evaluating US dietary intake data in children ages 9–15 years. 2005–2016 US National Health and Nutrition Examination Survey (NHANES) data from the Centers for Disease Control and Prevention.

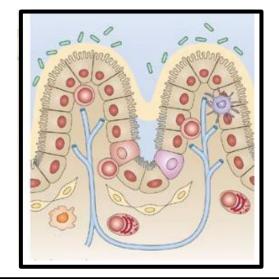
Nutrition Builds & Maintains Brain

- Vit B1 utilize glucose, modulate cognition, language development, neurotransmitter synthesis
- Vit B6, B12, choline, tryptophan, tyrosine, phenylalanine, copper, histidine, threonine – synthesis of *neurotransmitters*
- **Vit B12** cognition, language, myelination
- **Vit C** antioxidant, cognition, memory, myelination
- **Vit D** prevents neurodegenerative disease
- **Vit E** cell membrane integrity, antioxidant, protection of DHA

- Iron oxygenation, synthesis of myelin & neurotransmitters, brain development, IQ
- Magnesium energy and ion regulation, neural plasticity
- **Zinc** neuromotor transmission, cell proliferation, taste
- Iodine (via thyroid) cellular energy metabolism
- **Omega 3 PUFA (DNA)** cognition, visual development
- Lutein macular protection
- Flavonoids protect & enhance neurons, anti-inflammatory, cognition



Quality Nutrition Supports Immune Defense



Gastrointestinal Immunity

Epithelial barriers	Cellular immunity	Antibody production
Vitamin A	Vitamin A	Vitamin A
Vitamin C	Vitamin B _e	Vitamin B ₆
Vitamin E	Vitamin B ₁₂	Vitamin B ₁₂
Zinc	Vitamin C	Vitamin D
	Vitamin D	Vitamin E
	Vitamin E	Folic acid
	Folic acid	Zinc
	Iron	Copper
	Zinc	Selenium
	Copper	
	Selenium	

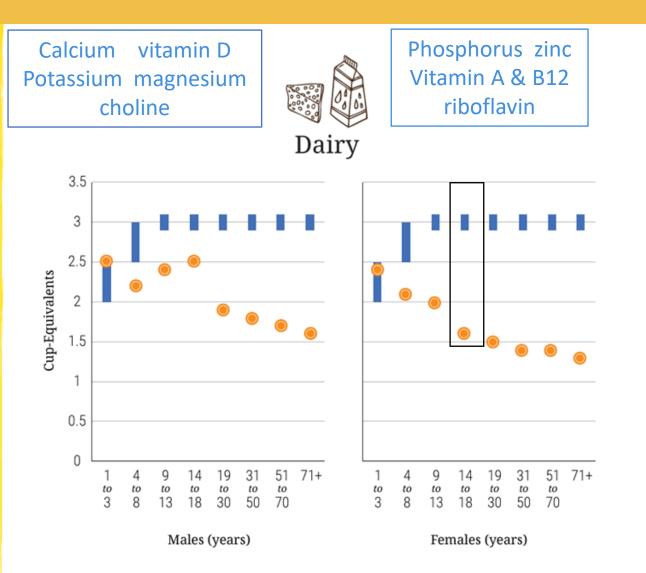
A good to excellent source of

- Protein
- Calcium*
- Vit D*
- Potassium*
- Vitamins A
- B Vitamins: riboflavin (B2), niacin (B3), pantothenic acid (B5) and cobalamin (B12)
- Phosphorus
- Iodine
- Selenium
- Zinc



*The number 1 source for 3 of 4 DGA *nutrients of concern*





Influencers

- Peers
- Body image
- Media, social media
- Adult models
- Food security
- Dietary preferences
- Cost, convenience
- Personal / cultural beliefs

Chart Legend Blue: Recommendation Orange: Current Consumption

Dairy, Linear Growth, & Bone Health

- Milk raises a growth hormone, IGF-1, stimulating greater linear growth
- A study:
 - 4 groups of teens ranked by milk intake and physical activity
 - Those with the highest milk and PA had the highest bone mineral density
 - Critical during adolescent years



Dairy & Muscle Strength



- Resistance exercise followed by milk stimulates muscle growth
- Milk contains bioactive components, high-quality protein, calcium & vitamin D which modulate body composition
- High-protein dairy milk (post-exercise and pre-sleep) during 6 weeks of resistance training in boys and girls raised muscle mass, strength, and power

Dairy & Chronic Diseases

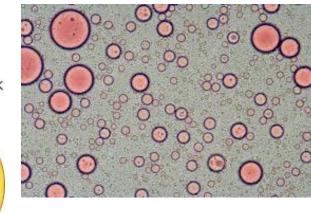
American Heart Association: "Poor diet quality is associated with an elevated risk of cardiovascular disease"

Systematic Reviews: Dairy improves body composition, facilitates weight loss when dieting, increases bone strength, and lowers risk of chronic diseases and certain cancers (colorectal, bladder, gastric, breast)



Dairy's Saturated Fats are Unique

Phospholipids Lipoproteins Glycerides Proteins Nucleic acids Enzymes Water



- Dietary Guidelines: limit total fat to less than 30% of energy and saturated fat to less than 10%. Consume low- or no-fat dairy products
- Recent studies: Risk of saturated fat depends on the source
- Risk for cardiovascular disease is food-specific, a so-called a "food matrix effect"
- In dairy, nutrients and bioactive factors combine with a unique fat structure to *lower* hypertension and risk for cardiovascular disease, especially stroke, as well as type 2 diabetes

Non-consumers of Dairy have Lower Diet Quality

Milk and dairy nutrients are critical, especially during growth

- Low milk consumption is associated with lower intakes of
 - Calcium, Vitamin D magnesium, iodine, zinc, and potassium
- Non-consumers show a higher risk of
 - Hypertension, cardiovascular disease, Type 2 diabetes
 - High BMI and obesity
 - Osteoporosis and fractures

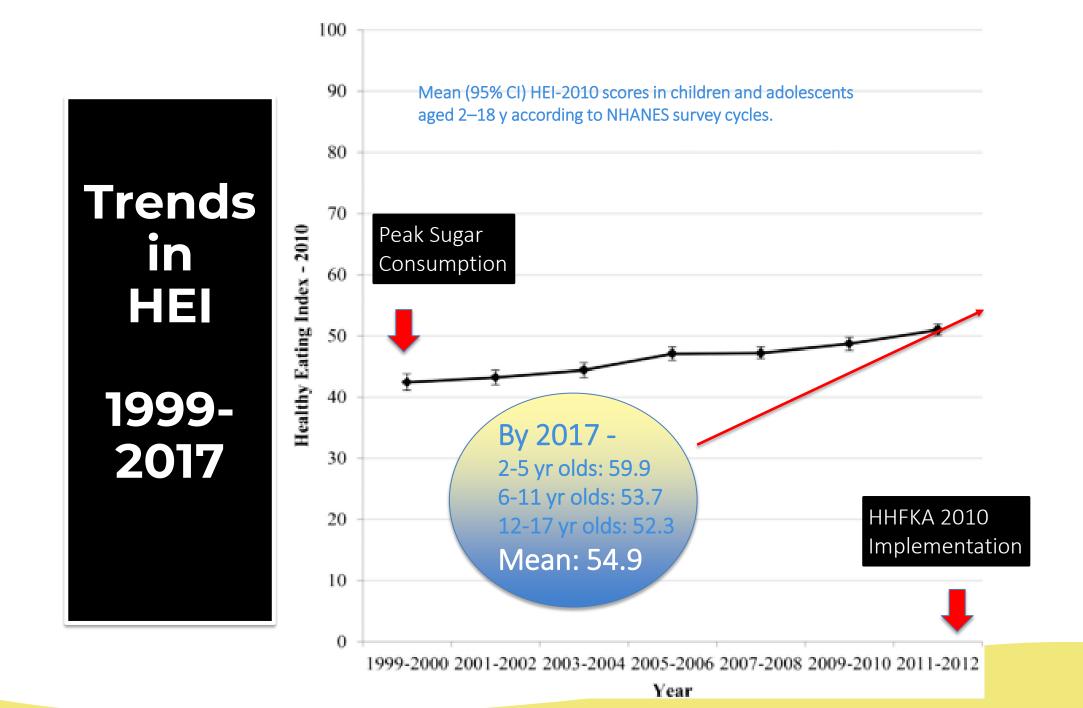


School Meals

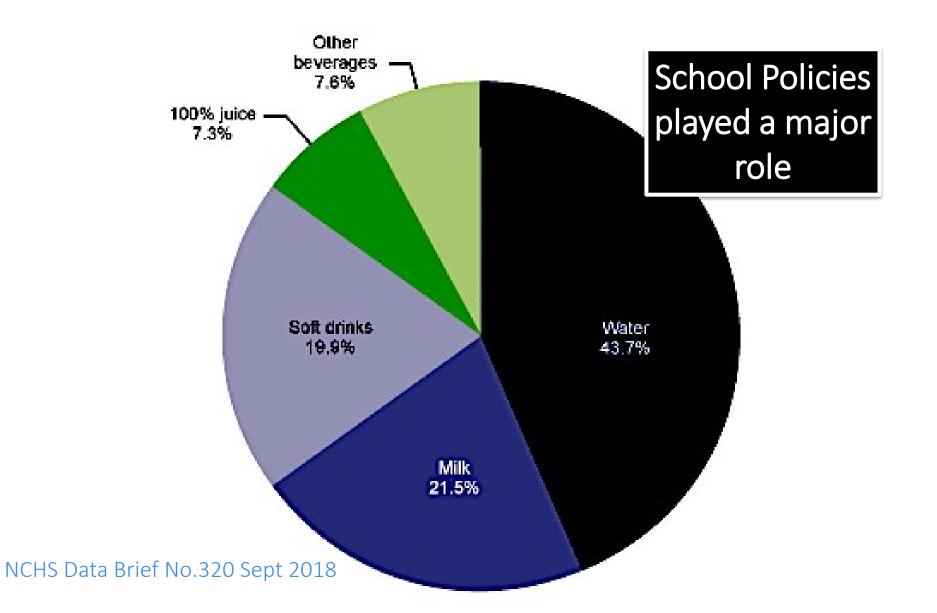
are Quality Meals

Between SY 2009-10 and SY 2014-15 The total HEI-2010 meal scores increased School Lunches: from 58 to 82 out of 100 ideal School Breakfasts: from 50 to 71 of 100 ideal

Gearan and Fox, JAND, 2020:363-70



Beverages: 2-19 yr olds, U.S. NHANES 2013-2016



34

Continue Dairy Despite Lactose Intolerance

- Hodges: multiple public health organizations recommend that all individuals -- including those who are lactose intolerant -consume three servings of dairy per day to ensure adequate nutrient intakes and optimal bone health
- Brown-Riggs: the National Medical Association and the National Hispanic Medical Association recommend that those with lactose intolerance consume three to four servings of low-fat dairy every day.



Plant-Based Beverages

- 641 PBB products in 2018 USDA Branded Food Products Database
- Highly processed: Soy, almond, coconut, tree nut, flax/hemp, pea, quinoa, rice, etc.
- Only 5% met new recommended standards; fortification in only 1/2; Vit D and B12 were low
- Protein low: 0-10 g/serving
- Added sugars, salt, fats
- Not a substitute for diary milk, especially among young, growing children

The best protein quality as a substitute for dairy for allergic children is soy and pea





Diet Quality HEI-2015

	Adequacy:	
	Total Fruits ²	5
	Whole Fruits ³	5
	Total Vegetables ⁴	5
	Greens and Beans ⁴	5
	Whole Grains	10
	Dairy ⁵	10
	Total Protein Foods ⁴	5
	Seafood and Plant Proteins ^{4,6}	5
_	Fatty Acids ⁷	10
	Moderation:	
	Refined Grains	10
	Sodium	10
	Added Sugars	10
	Saturated Fats	10

Diet quality is central to optimal growth and development

School meals support high diet quality

The 13 nutrients in milk raise the nutritional value of *any* meal

Plant-based beverages *are not* an equivalent substitute for dairy milk

Poll Question: Students drink more milk when flavors are available.

a) True b) False

It's only nutritious if you eat it! Encouraging students to consume dairy. Dayle Hayes, MS, RD

School Meal That Rock



Dayle Hayes, MS, RD

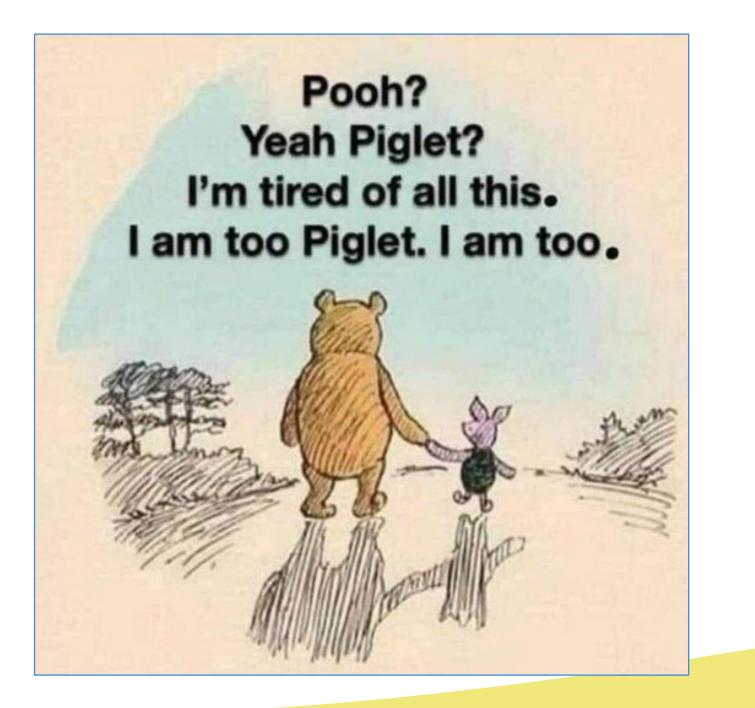
Facebook TIPS for School Meals That Rock Dayle.Hayes.RD Twitter @SchoolMealsRock Instagram @SchoolMealsThatRock Blog SchoolMealsThatRock.org **Email**

EatWellatSchool@gmail.com

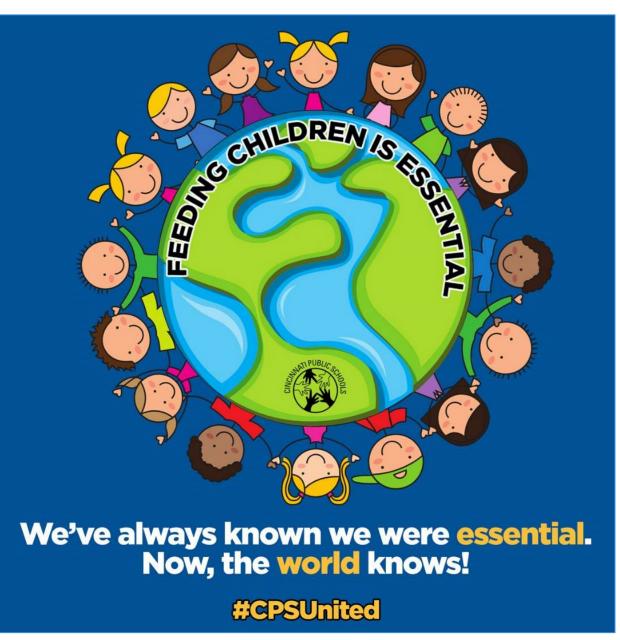


Moving Forward Exhausted, Flexible and Resilient









Thanks to Cincinnati Public Schools, Jessica Shelly and Rachel Irons





Paty Camarena Lopez is with Lorena Gonzalez. December 17, 2020 · 🚱

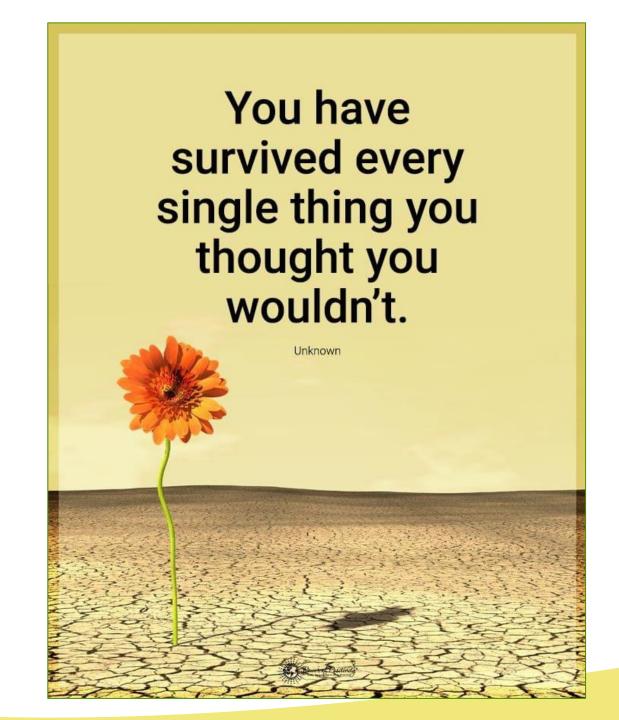
...

It's easily said 900 \ 7 days worth of lunch 7 days of breakfast that's about 6300 =12600 all together ion of each our crew came back with nothing left! Plus we had curbside ready and home delivery and working on dry and frozen for when we come back! ...it's been a crazy 2020 but we got this! Miss our students hopefully we will get back to "normal" soon! Stay safe everyone Merry Christmas from SHS out here in California ion GREAT JOB



El Centro CA









Effie Marie Jackson February 10 at 8:03 PM · 🚱

Unexpected delivery and mass chaos but so happy to have a truckload full of plates and sporks show up this morning! Denise Pollack — 😎 feeling fabulous.



Monroe County FL

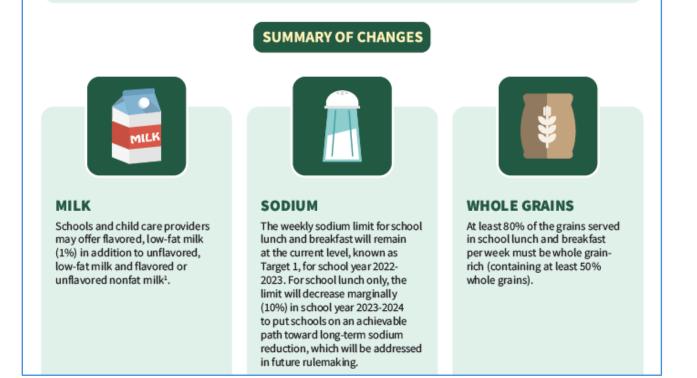
...



AT A GLANCE

CHILD NUTRITION PROGRAMS: Transitional Standards for Milk, Whole Grains, and Sodium Final Rule

This new rule establishes standards for milk, whole grains, and sodium for school years 2022-2023 and 2023-2024 to give schools time to transition in the short term. Meanwhile, USDA is working to develop long-term nutrition standards - based on the newest DGA and extensive input from a wide range of partners - that will work for schools, families, and industry alike. USDA expects to publish a proposed rule on the updated standards in fall 2022.







Importance of DAIRY Chocolate Milk Marketing Dairy



Let's Talk Chocolate Milk



















with initiale a of key nutri ents and food groups. J Adolesc Health 20 NI Golden, SA Abrems. Optimizing bone health in children and addescents. Pediatrics, 2014 - Am Acad Pediatrics. October 2014, VCLUNE 134 / 15 SLE /



2021

Nutrient-Rich

Like white milk, chocolate milk has the same essential nutrients important for kids' growth. development, and physical activity.

Top Milk Choice in Schools

Chocolate milk is the most popular milk choice in schools and, when available, students drink more

Kids who drink chocolate milk have better quality diets and are just as likely to be at a healthy weight as kids who do not drink chocolate milk. Kids benefit from the many nutrients in milk, like calcium, vitamin D, and potassium.

1-2-3 Servings Each Day

Kids' average daily intake of dairy falls short of recommendations, especially as they get older. A serving of chocolate milk can help close the gap between actual and recommended intakes of milk and milk's nutrients.

A great choice for young athletes to fuel for physical activity, replenish fluid and electrolytes post-exercise and support bone

Chocolate milk helps meet nutrient needs while remaining affordable

Frany CD, Johnson RK, Wang MG. Children and adole scents' choices of foods and baverages high in added sugars are associated



mnh.gov/pubmed/23340316

New England Dairy

Adapted from United Dairy Industry of Michigan 2021.

Marketing DAIRY

- Serve great food in schools
- Make it fun/interesting/cool
- Surprise your customers
- Check out your colleagues



1

York Schools Nutrition Program

💔 November 11, 2021 · 🕲

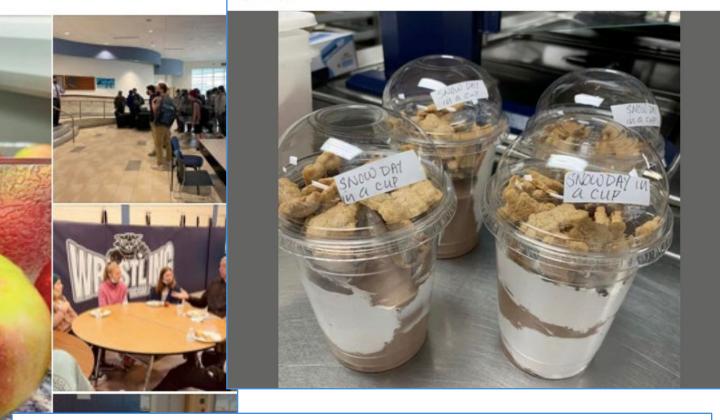
Thank you Veterans for your service!

Veterans Day Breakfast and meet and greet was a huge success at the high school

York Schools Nutrition Program December 3, 2021 · 🕄

...

Hot cocoa parfait w/ teddy grahams 😅 At YMS today General Mills General Mills for K-12 Schools #parfaitpro



York Schools ME



...



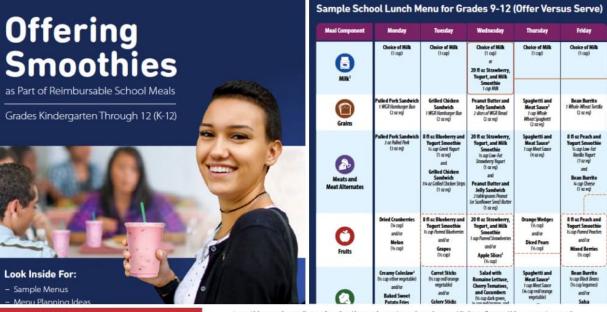
Shaker Regional NH





Chef Monica, General Mills K-12 Foodservice





SMOOTHIE PREPARATION INSTRUCTIONS

Smoothies can be easily made using the equipment you have in your kitchen. If smoothies are not served immediately, refrigerate at 41 degrees F or below. Smoothies can be made the day before serving, portioned, and held in the fridge overnight. They may also be held in the freezer if they need to be held longer than overnight. Tip: In order to meet the smoothie requirements, we recommend multiplying the amount of each required component by the desired number of servings to get the total amount of the ingredient needed per recipe

IMMERSION BLENDER METHOD (FOR BATCHES LARGER THAN 10 SERVINGS)

BLENDER METHOD (FOR BATCHES OF 10 SERVINGS OR LESS)

Combine the fruit/

vegetables, yogurt and

milk in the blender.

BEST PRACTICE TIPS:

- Immersion blenders are more commonly used because of its efficiency and ability to produce large quantities at a time.
- Use a round mixing container instead of a square container to prevent ingredients from lodging in the corners. Some find using a container with a spigot useful for portioning into cups.

HELPFUL HINTS:

- Create smoothies in school colors
- Build layered smoothies to showcase different colors
- Colobrato with fun straws

Pull frozen fruit

from the freezer.

Pull frozen fruit

from the freezer.



Combine the fruit/

vegetables, yogurt and

milk in a large container



Blend until desired

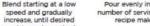
consistency is reached.



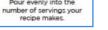
Pour evenly into the

number of servings your

recipe makes.



Pour evenly into the





https://www.fns.usda.gov/tn/offering-smoothies-part-reimbursableschool-meals

Marketing DAIRY

- Serve great food in schools
- Make it fun/interesting/cool
- Surprise your customers
- Check out your colleagues







Lancaster City Schools Food Service Department February 11 at 9:51 AM · 🕥

Our elementary buildings are starting to offer the new charcuterie bowls. Mount Pleasant & Gorsuch West sent in a picture of what they had to offer. Charcuterie bowls are available to all students as a free lunch option.





...

Lancaster OH







CREATING KID-CUTERIE BOXES FOR SCHOOL MEALS





Many take out style containers make great grab & go boxes for Rid-Cuterie Meals in school breakfast & lunch! Find one with a lid or a clamshell container for easy, attractive covering!

Choose 2 Sources of Meat/Cheese

Select 2 sources of meat/meat alternate to credit fully as 2 oz: Choose from: I oz of cheese cubes, sliced deli meat crediting at I oz (check the food buying guide for amount!), hard boiled egg slices, hummus, sunflower seeds



hoose Zoz of Train Products

Choose from whole grain crackers, pretzels, flatbreads, pasta or grain salads, granola, cereal, crediting a 2 grain components

Choose 3/4 c. Raw Vegetables



Add a variety of brightly colored vegetables! Popular choices include cherry tomatoes, crunchy carrot sticks, celery sticks, snap peas, and multi colored pepper strips

> Add 1/2 c. Fruit









Marketing DAIRY

- Serve great food in schools
- Make it fun/interesting/cool
- Surprise your customers
- Check out your colleagues









Today we tested our ramen soup bowl with the senior pods at one school site. Our Nutrition Coordinator was able to set up the QR code so we could get input. Thanks Megan Beck! The students get the bowl and then go to a station to add hot water. We also have Sriracha and chopsticks available.





El Monte CA





PLEASE TAKE OUR



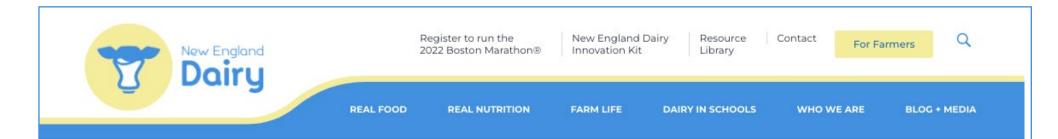
The Chicopee Public Schools Food Service Department is getting a food truck, and we want your input before it hits the streets! Scan this QR Code Or visit tinyurl.com/ curbsidecafeteriasurvey to take the survey!



Chicopee MA



Follow us @curbsidecafeteria!



Hot Chocolate Milk

Help increase milk consumption and attract new customers to your breakfast and lunch programs by serving hot chocolate milk.

Real Milk. Real Chocolate. Real Good.

New England Dairy is excited to share our new resources to help schools add hot chocolate milk to their menus.

Heating chocolate milk and offering it as hot chocolate to older students is a great way to help increase milk consumption and attract new customers to your breakfast and lunch programs. Students will love it.

Listen to what students at Auburn High School in Auburn, MA have to say about hot chocolate milk as a part of their school meal programs.





Marketing DAIRY

- Serve great food in schools
- Make it fun/interesting/cool
- Surprise your customers
- Check out your colleagues





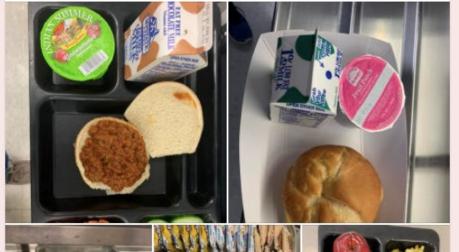
TIPS for School Meals That Rock

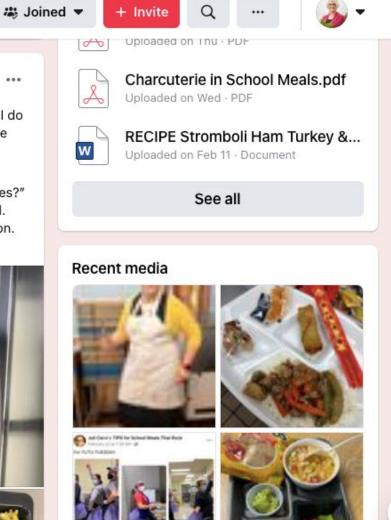


Susan Bates February 18 at 7:47 PM · 🚱

We are here to serve every student in our schools. My staff and I do this wholeheartedly everyday. We have conversations with these students. We ask them what we can do to make them happy.

Recently I asked a 5 year old what we should put on the March menu. His response was, "Can we do pasghetti with long noodles?" "We sure can. What kind of vegetables should we have" I asked. "Green beans", he said. In comes a 6 year old to the conversation. "I've always wanted to ... See more



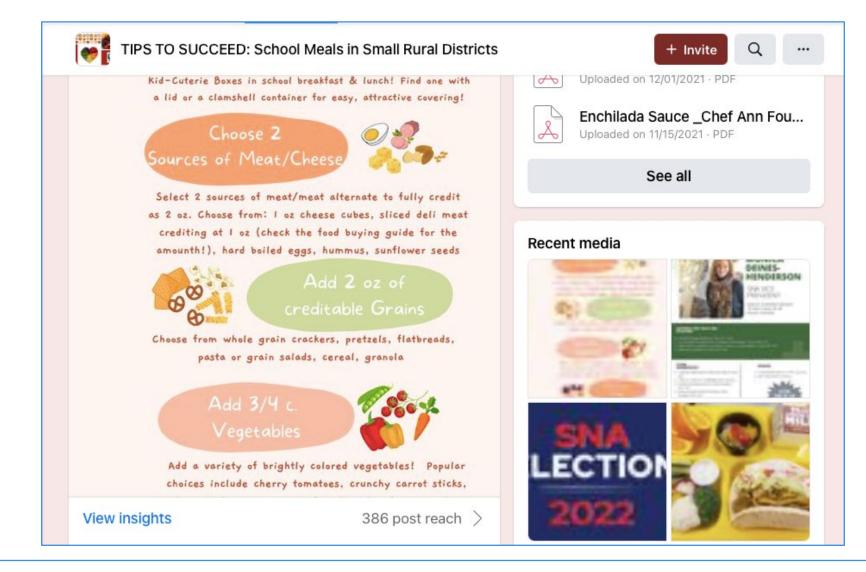


TIPS for School Meals That Rock

...



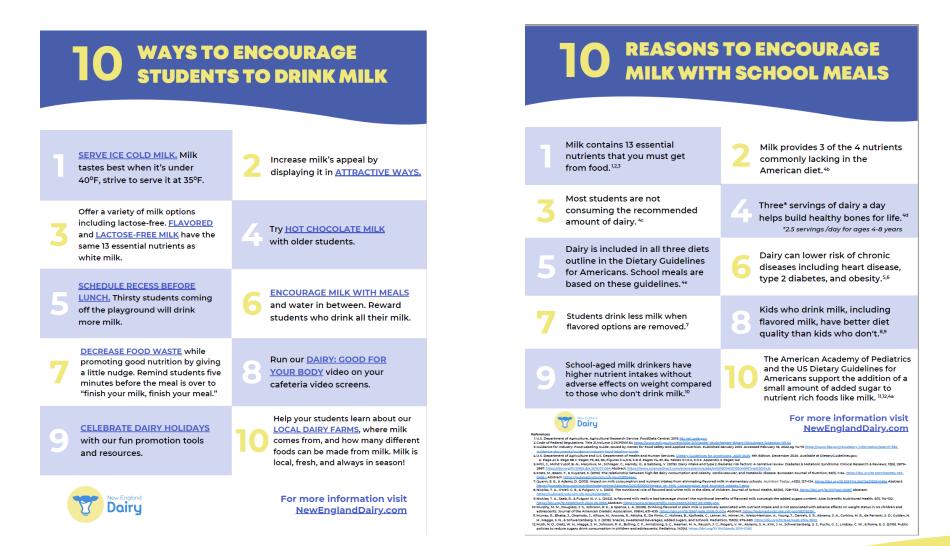
C



TIPS to SUCCEED in Small Rural Districts



Additional Resources



NewEnglandDairy.com

Questions? & Next Steps

info@newenglanddairy.com