



Healthy Kids Collaborative: Strengthening Plant-Forward School Meals with Beef

Shalene McNeill PhD, RD

Randi Boleman, PhD, RD, LD, CSSD

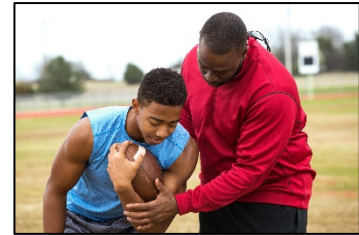


Disclosures



Nutrition: A Farmer and Rancher Priority

Understanding beef's role in healthy lifestyles and support Americans' journey towards healthier diets with beef





Farmer and Rancher's Beef Checkoff Program

- Founded, funded and governed by America's beef farmers, ranchers and importers
- Funds used to research, innovate and promote beef
- U.S. Department of Agriculture oversight
- Funds cannot be used to influence policy





State Beef Councils

- 44 State Beef Councils
- 50 cents of Checkoff dollar stays in the state it is collected in for local use
- Nutrition is a priority in most states



Kori Dover, RD
Director, Food & Nutrition Outreach
California Beef Council

NCBA Beef Nutrition Experts



Shalene McNeill, PhD, RD
Executive Director,
Nutrition Science, Health &
Wellness



Clara Lau, PhD
Senior Director, Nutrition
Research



Amy Cifelli, MS, RDN
Director, Nutrition
Research &
Education



Emma Mortensen, MS
Intern, Nutrition Research



Riley Peterson, RDN
Associate Director, Nutrition
Influencer Programs



Lillie Berman, MS, RDN
Associate Director, Nutrition
Influencer Education &
Measurement



Brooke Vyvlecka
Nutrition Research

Our Nutrition Philosophy



Statement of Principles Regarding Nutrition and Health

As producers, processors, and marketers of the nation's beef supply, we are committed to providing a wholesome, nutritious food, and to communicating accurate information about beef's nutritional qualities and the role of beef in a healthful diet. We pledge to use the following principles to guide our actions and communications about beef in regard to nutrition and health.

- 1 We will provide factual, scientifically supported information about beef to help consumers make informed choices about what they eat.
- 2 We support the Dietary Guidelines for Americans recognizing that there are a variety of ways to achieve a healthy diet, and further, we believe that the overwhelming scientific evidence shows that dietary balance, variety, and moderation coupled with appropriate physical activity provides the foundation for a healthful life.
- 3 We are committed to conducting and participating in programs to actively disseminate accurate information about the nutritional advantages of beef in a healthful and balanced diet and lifestyle.
- 4 We recognize the important role of health professionals and nutrition educators in providing nutrition information and are committed to working with them and their professional organizations to communicate accurate information about nutrition and health.
- 5 We believe that dietary balance, variety, moderation, and physical activity are the keys to health, and we also encourage individuals with specific health concerns that require dietary modification to consult a physician followed by nutrition counseling from a Registered Dietitian/Nutritionist.
- 6 We support research on the nutritional qualities of beef and will accurately communicate research findings to help consumers make informed decisions about their diet.
- 7 We recognize that consumers want foods that are good tasting and convenient as well as nutritious and will support research to provide beef products that meet these consumer demands.

The Statement of Principles Regarding Nutrition and Health was first adopted by the beef industry in 1984.

This Statement of Principles is reviewed on a regular basis by the Nutrition & Health Committee, along with NGBA's Federation Division board of directors and the Cattlemen's Beef Board. Every beef farmer, rancher and importer contributes to a fund called the beef checkoff, which is used to support beef nutrition education efforts.

For more information, please visit BeefItsWhatsForDinner.com



Backed by Beef Farmers and Ranchers

- We will provide **factual, scientifically supported information** about beef to help consumers make informed choices about what they eat.
- We support the Dietary Guidelines for Americans **recognizing that there are a variety of ways to achieve a healthy diet**, and further, we believe that the overwhelming scientific evidence shows that **dietary balance, variety, and moderation coupled with appropriate physical activity provides the foundation for a healthful life.**
- We support research on the nutritional qualities of beef and will **accurately communicate research findings** to help consumers make informed decisions about their diet.

Better Together

have a plant

Fruits & Veggies F&V Inspo Recipes Expert Advice Contributors

SIGN UP LOGIN



ADD TO LIST

The Ultimate Trifecta: Fruits, Vegetables + Beef, United On The Plate

By [Wendy Reinhardt Kaosak](#)

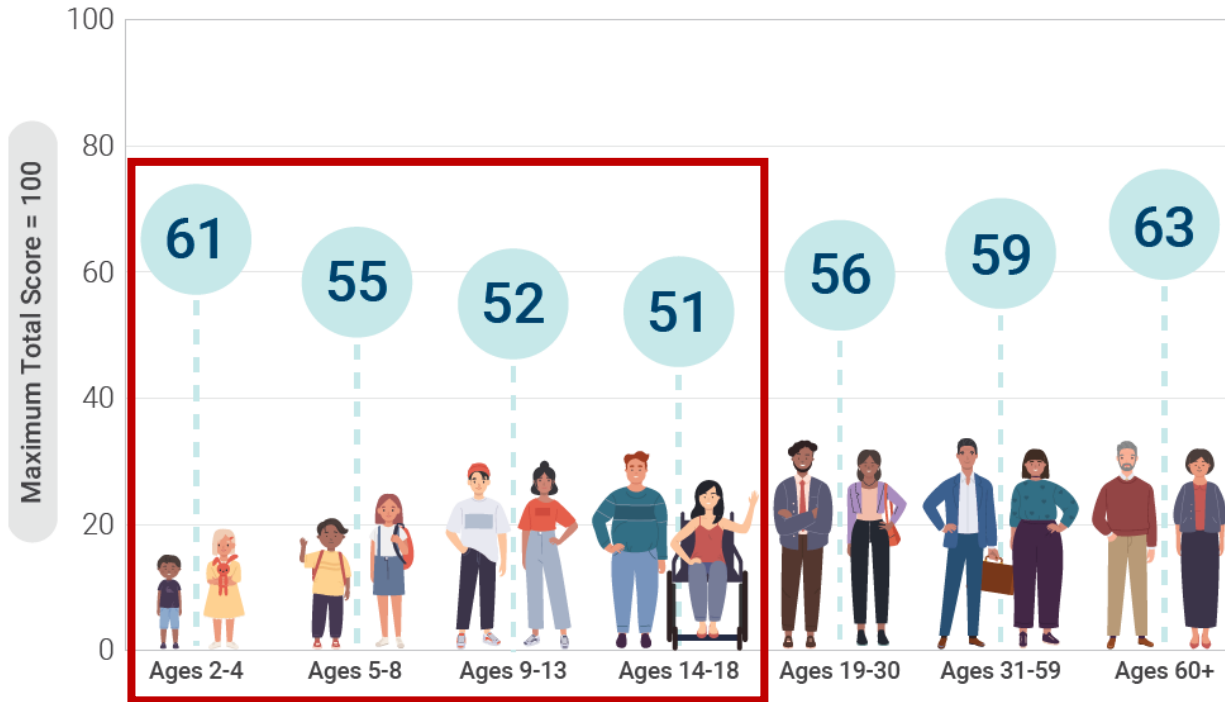
<https://fruitsandveggies.org/stories/the-ultimate-trifecta-fruits-vegetables-beef-united-on-the-plate/>

Why Beef for Healthy School Meals?

A delicious
nutrient-rich
food that kids
love.



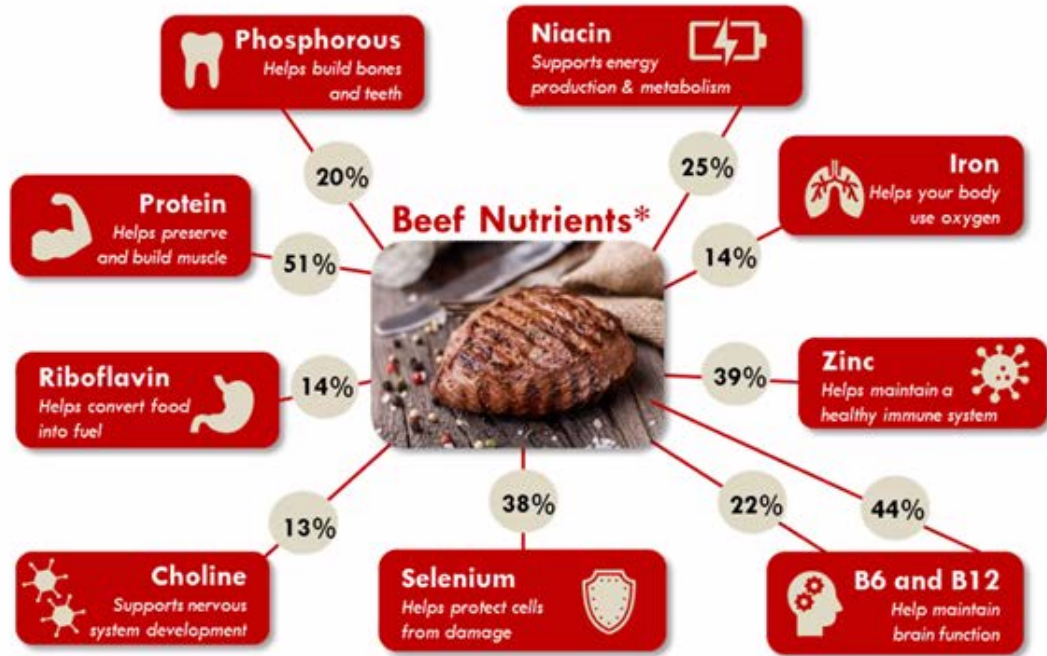
Eating Patterns Not Making the Grade



School meal programs can provide nearly two-thirds of daily calories, and therefore play an influential role in the development of a healthy dietary pattern.

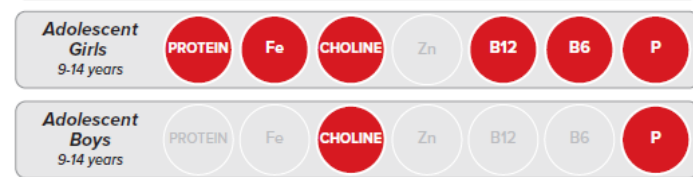
From the Dietary Guidelines Report:
"Adolescents ages 9-14 years have a constellation of potential nutritional risk factors that are considered a public health challenge. Girls have low intakes from foods and beverages of protein, iron, folate, vit b6 and vit b12, and girls and boys have low intakes of phosphorus, magnesium and choline."
Part D, Ch 1, pg 74, 2020-2025 Dietary Guidelines Advisory Committee Report

... and Nutrient-Rich Beef Can Help Fill the Gaps



*Percent of Daily Value in 1 serving (3 oz) of cooked lean beef;

Nutrient Areas of *Challenge* or *Concern*





Leaner Over Time



The evolution of beef trimming specifications, as well as cattle breeding and feeding has led to a **44% reduction** in fat and a **29% reduction** in saturated fat in the beef we eat.

- Changes in trimming practices have reduced external fat on beef cuts by 81%
- Genetic selection and improved cross-breeding to raise heavier muscled, leaner cattle
- Improved feeding that provides balanced nutrition to support lean tissue growth





All beef choices are nutritious and can support healthy school meals

GRAIN-FINISHED

(most beef is raised this way and likely doesn't have a specific label claim)

THIS BEEF COMES FROM CATTLE THAT...

- Spend the majority of their lives eating grass or forage
- Spend 4-6 months at a feedyard eating a balanced diet of grains, local feed ingredients, like potato hulls or sugar beets, and hay or forage
- May or may not be given U.S. Food and Drug Administration (FDA)-approved antibiotics to treat, prevent or control disease and/or growth-promoting hormones

GRASS-FINISHED OR GRASS-FED

THIS BEEF COMES FROM CATTLE THAT...

- Spend their whole lives eating grass or forage
- May also eat grass, forage, hay or silage at a feedyard
- May or may not be given FDA-approved antibiotics to treat, prevent or control disease and/or growth-promoting hormones

CERTIFIED ORGANIC

THIS BEEF COMES FROM CATTLE THAT...

- Never receive any antibiotics or growth-promoting hormones
- May be either grain- or grass-finished, as long as the USDA's Agriculture Marketing Service (AMS) certifies the feed is 100% organically grown
- May spend time at a feedyard

NATURALLY RAISED

(may be referred to as "never-ever")

THIS BEEF COMES FROM CATTLE THAT...

- Never receive any antibiotics or growth-promoting hormones
- May be either grain- or grass-finished
- May spend time at a feedyard



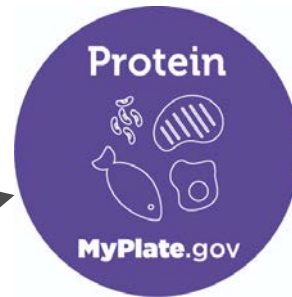
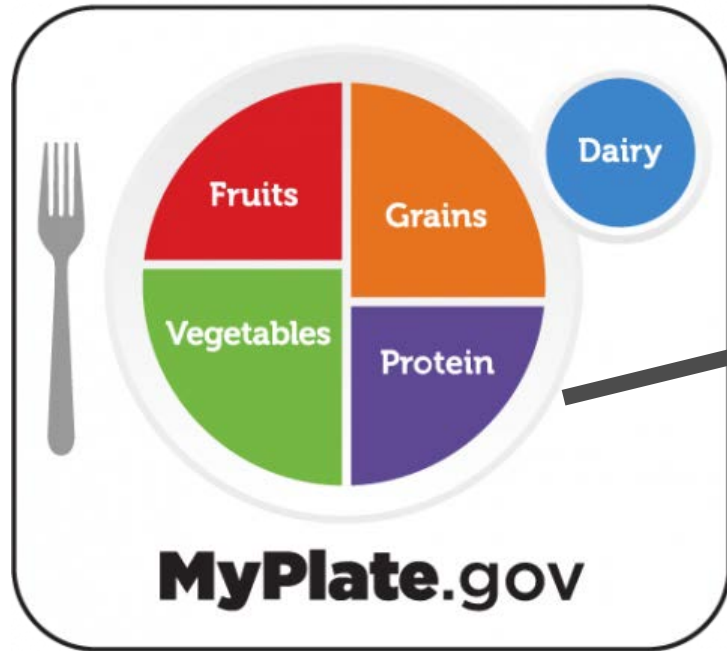
Beef is consumed
in a variety of
dietary
patterns...and
there is room for
improvement



A Foundational Part of a Healthier Plate



Children's Protein Needs: *Quality and quantity matter*



What counts as 1 ounce-equivalent in the Protein Foods Group?

- 1 ounce of meat, poultry or fish
- ¼ cup cooked beans
- 1 egg
- 1 tablespoon of peanut butter
- ½ ounce of nuts or seeds

Animal Protein Advantages

- Scientist compared 2 oz-eq of protein foods (beef sirloin, pork loin, eggs, tofu, kidney beans, peanut butter, mixed nuts) on protein synthesis and breakdown in young adults



2 oz



2 oz



2 eggs



1/2 cup



2 Tbsp



4 oz



1 oz

Study takeaway:

Animal-based protein food sources elicited greater protein synthesis rates and less protein breakdown than plant-based protein food sources

It's hard to beat the nutrient package and flavor of beef



High quality protein

Contains digestible essential amino acids in right proportion to support growth, development and body mass. Beef also contains proteinogenic AA as well as antioxidant AA and peptides that improve human growth, development, and health.

Essential nutrients

Protein, Iron, B12, Niacin, B6, Riboflavin, Zinc, Choline, Selenium, Phosphorus

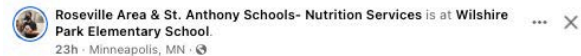
Great Flavor

fat-like, brown/roasted, beef identity, bloody/serumy, metallic, umami, sweet, and salty

Ruminant Upcycling

Beef Ranchers Support School

Healthier School Meals = Healthier Communities



A student favorite returned to the menu today-- sambusas, Bariis Iskukaris, bananas and veggies!

Last year we served this menu for a [#MNTuesday](#), but it was such a hit we decided to move it to our monthly menu this winter! A big "Thank You" to Bloomington based [Hoyo Sambusas](#) for hand folding over 5,000 sambusas with local Minnesota beef and [ChefTijerina](#) for our xawaash spice blend.

This is school lunch!



Beef Ranchers Support Schools

Creativity in the Classroom



New York schools win sixth annual beef competition

Top Cut Beef Contest was hosted by New York Agriculture in the Classroom and the New York Beef Council

PUBLISHED ON JANUARY 3, 2023



- Inside-Out Sliders
- Truxton Tacos
- Beefy Brawlers
- Good Golly Goulash
- Chili Sundaes
- Gopher Gordita Crunch
- Marauder Bowl
- Beefy Thai Noodles
- Meatball Meatball Meatball



Healthy Kids Collaborative: Beef in School Food Service

Randi Boleman, PhD, RD, LD, CSSD





Randi Boleman Intro

- Texas A&M Graduate
 - Bachelor of Science in Animal Science
 - MS, PhD in Food Science & Technology, focus on Meat Science
- Registered Dietitian & CSSD
- 20 yr in School Nutrition Services
- Currently Waller ISD Director of Nutrition Services
- Lives in Houston with husband, Dr. Chris Boleman



Beef's Place in School Nutrition

- Governing bodies – USDA & Texas Dept Ag
- Barriers & Limitations in School Nutrition
- USDA Food & Nutrition Guidelines
- Opportunities for Beef



Barriers & Limitations - Cost

- Mindset: Showcase most expensive meal component - Meat/Meat Alternate (M/MA) as center of plate or focus of meal
- Receive commodity funding for commodity processing (pre-cooked beef patties) or raw material (raw ground beef)
- Specially raised beef (organic, grass fed, etc.) and whole muscle cuts are higher in cost, not commodity funded, limited supply

Barriers & Limitations - Staffing

- Much of the today's food service workforce does not 'cook' at home.
- Extensive training on food safety and HACCP (proper food handling, temperatures, etc.)
 - Takes time. Time is money.
- Raw vs pre-cooked
 - Safety considerations
 - Quality considerations
 - Consistency

Budget Matters

More Ready To Eat Products & Less Staffing & Less Training
(higher food cost, lower staff cost, possible less quality)

VS

More Homemade Items & More Staffing & More Training
(lower food cost, higher staff cost, possible better quality)

Either way, Beef can be part of the solution.



USDA School Nutrition Guidelines

- Limitation on Calories, Sodium, Saturated Fat
- Daily amount based on average of 5-day week

LUNCH	K-5	6-8	9-12
Calories (daily)	550-650	600-700	750-850
Sat Fat (% of total cal)	<10	<10	<10
Sodium (mg)	≤1110	≤1225	≤1280

It Fits!!!

Beef can have a place in school meals and student nutrition



USDA Meal Pattern

Minimum Requirements for Food Group at School Meals Per Day

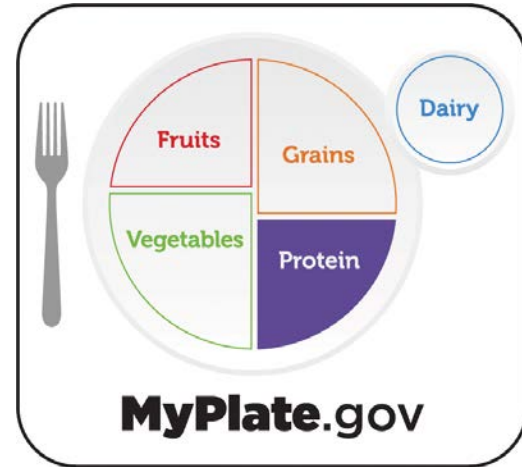
	Breakfast			Lunch		
	Grades K-5	Grades 6-8	Grades 9-12	Grades K-5	Grades 6-8	Grades 9-12
Fruits (cups)	1	1	1	1/2	1/2	1
Vegetables (cups)	0	0	0	3/4	3/4	1
Grains (oz eq)	1	1	1	1	1	2
Meat/MA (oz eq)	0	0	0	1	1	2
Milk (cups)	1	1	1	1	1	1

No M/MA required at Breakfast

USDA Meal Pattern - Compared to MyPlate

Recommended oz eq/d
(based on age, sex, daily calories)

- 5 to 8 yr = 3 to 5.5
- 9 to 13 yr = 4 to 6.5
- 14 to 18 yr = 5 to 7



Make every bite count.

You can count on Beef.



[Recipes \(beefitswhatsfordinner.com\)](http://beefitswhatsfordinner.com)



Beef Quality in Schools

- Misconception of School Meals & Commodity Beef
- USDA Inspected
- Same as what you buy in the store
- Same quality at a cost benefit
 - Out of commodity dollars – pay commercial price
- Nutrition Powerhouse
 - \$2 per lb 80/20 Ground beef has same protein, vitamins, minerals as \$5 per lb.

Opportunities for Beef in Schools Meals

- Kids eat:
 - What they eat at home
 - What they get at food establishments
 - What they consider 'cool'
- Beef product acceptability
- Local food preferences



Opportunity for Beef in School Meals

- Creativity with beef in the kitchen
 - Will students accept it?
 - Is it cost effective? (cost, staffing, available, etc.)
 - Will my staff prepare it properly?
- Listen to the Students. Listen to your Staff.

Small changes make big differences!



Opportunity for Beef in School Meals

- Think outside the 'bun'... Beef is versatile ingredient.
- Think about beef as more than the 'star'
 - Don't think about swapping for alternative protein source, think about combining and complementary.
- Pair complementing foods
 - Foods that enhance acceptability
 - Foods that enhance nutrition value
 - Foods that introduce new foods & flavors to students

Ideas



Resources



WELCOME TO THE BEEF NUTRITION EDUCATION HUB
THE HEALTH AND NUTRITION COMMUNITY'S EDUCATION PORTAL FOR BEEF NUTRITION RESOURCES & CONTINUING EDUCATION OPPORTUNITIES

- STEP 1** CREATE AN ACCOUNT
- STEP 2** ENROLL IN A VARIETY OF EDUCATIONAL COURSES
- STEP 3** COLLECT CONTINUING EDUCATION CERTIFICATES
- 4** SIGN-UP FOR THE QUARTERLY BEEF NUTRITION E-NEWSLETTER

[Beef- It's-What's-For-Dinner.com/beef-nutrition-education-hub](https://www.beef-its-what-s-for-dinner.com/beef-nutrition-education-hub)



Shalene McNeill, PhD.

Executive Director

Nutrition Science, Health & Wellness

National Cattlemen's Beef Association

smcneill@beef.org

(830) 570-1240

THANK YOU.