

The New School Meal Pattern: Nutritional Foundations and Strategies

Mid-Atlantic Regional Office
Food and Nutrition Service - USDA

October 2012 10/19/12



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Today's Objective

Provide information and tools to promote and manage the new meal pattern.

Eating habits are difficult to alter, whether their one's own or instructing/guiding/advising others.

Especially teenagers.

And you cannot say, "*When I was a kid.....*"

Forget about it!!!!

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Outline

1. Food for everyone
2. Obesity threats & health issues
3. Obesity, how did we get there?
4. Portion distortion
5. Basis of new nutrition standards
6. Nutritional changes to the meal pattern
7. Nutrient dense foods
8. Fruit, vegetables, whole grains, milk
9. Other specifications & health
10. Sodium reduction efforts
11. Trans fat
12. Calories
13. Active hungry students
14. Offer vs. serve
15. Smoothies
16. School day just got healthier
17. Best practices website

Before Obesity: The New Menu Pattern is Good for Everyone

- Eating vegetables and fruit, whole grains, and milk:
 - Keeps us energized & awake, without feeling weighed down
 - Helps protect us from illness (who likes feeling sick)
 - Promotes attractive hair, finger nails, and complexion
 - With a good physical fitness program, these foods are a foundation for these careers: the armed forces, police, fire service, first responders



Obesity: A Health Threat to Our Nation

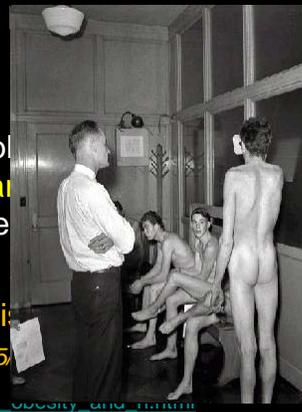
- Close to one-third of children are overweight or obese
- *Trust for America's Health* and the *Robert Wood Johnson Foundation* recent report (9/11/12)
 - Projected obesity rates: every state will reach at least 44 percent by 2030; some will exceed 60 percent.
 - Will add \$66 billion in annual obesity-related medical costs.
 - **New Jersey** faces the largest increase in costs, 34.5 %.
 - In **New York City**, obesity for elementary and middle-school students dropped 5.5 % from the 2006-07 school year to 2010-11, **thanks mostly to healthier school lunches**, public health experts said.

<http://www.chicagotribune.com/health/sns-rt-us-obesity-usbre88h0ra-20120918.0.7166415.story?page=2>

“Too Fat To Fight? Obesity Threatens Military Recruiting”

Says a group of more than 300 retired generals and admirals, April 20, 2010.

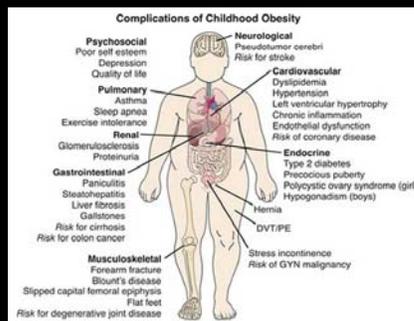
- “During World War II, at least 40 percent of potential military recruits were undernourished. So after the war, military leaders helped convince Congress to pass the **National School Lunch Program** to make subsidized meals part of curriculum.”
- “But now the military has the opposite problem: **million Americans of prime recruiting age are too fat to fight**, says the group, called Mission Readiness.”
- A new report called “Still Too Fat to Fight” is the group's 2010 report “Too Fat to Fight.” 9/25/10



http://www.npr.org/blogs/health/2010/04/too_fat_to_fight_obesity_and_military

Obesity: More Than Cosmetic

- Type 2 diabetes
- High blood pressure
- Heart disease
- Asthma
- Cancer
- Sleep apnea
- Gallstones
- Stroke
- Arthritis
- Fatty Liver



https://www.google.com/search?q=obesity+health+risk&rlz=1f-8&oeq=1f-8&aq=1&rs=om_mozilla-en-US-official&client=firefox-a

**Middle-age diseases
are now affecting our children!**

<http://www.nhlbi.nih.gov/health/health-topics/topics/obe/risks.html>

“For the first time in two centuries, the current generation of children in America may have shorter **life expectancies** than their parents, according to a new report, which contends that the rapid rise in childhood obesity, if left unchecked, could shorten life spans by as much as five years.”

The New York Times – March 17, 2005

We Don't Want a FSD Who Simultaneously Says

"The current portions are too small, kids are still hungry, we need to serve food like we used to."

AND

"School lunches are not responsible for the obesity epidemic, its what the kids eat elsewhere, and what their parents feed and teach them."

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We Want Food Service People Who Help Address the Obesity Crisis

- Portion and calorie control in school meals are part of the solution to the obesity epidemic.
- Immediate results by reducing excessive food quantities/calories.
- Long-term affect by teaching good eating habits.

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“Nutrition experts said children still get plenty of protein under the new plan, but teacher Linda O'Connor of Wallace High School in Sharon Springs, Kan., says active students, athletes and children who do farm work complain they are hungry by mid-afternoon.”

- WebMD, 9/26/12

What do we do???

Information is presented in later slides, in the handout, and at the *School Day Just Got Healthier and Best Practices Sharing Center* Team Nutrition websites.

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Obesity: How Did We Get Here?

Let's Move is much more than school lunch.

The screenshot shows the homepage of the Let's Move website. At the top, the logo reads "LET'S MOVE! America's Move to Raise a Healthier Generation of Kids". Below the logo is a navigation bar with five buttons: "Learn the Facts", "Eat Healthy", "Get Active", "Take Action", and "Join Us". The main content area features a large image of a lake with mountains in the background. To the right of the image is a section titled "Go Out and Play!" with text about First Lady Michelle Obama's message. Below the image is a "LET'S MOVE BLOG" section with a post titled "The More They Burn, the Better They Learn" dated November 16, 2012. To the left of the blog is a "LET'S MOVE ON FACEBOOK" section with a "Join the Conversation" button. At the bottom right, there is a "MOST POPULAR" section listing several articles.

Obesity: How Did We Get Here?



- **Thirty years ago**, most people led lives that kept them at a healthy weight.
 - More physical activity.
 - More home-cooked meals.
 - Smaller portion sizes, with vegetables.
 - Eating fast food was rare.
 - Snacking was an occasional treat, maybe once a day.

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Obesity: How Did We Get Here?

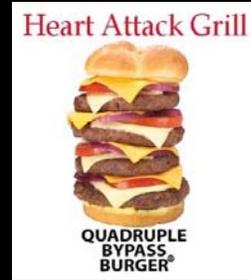
- **Today**, habits are different.
 - More unsafe neighborhoods, less outdoor activities.
 - More car and bus rides, less walking and bicycling.
 - Gym class and after-school sports have been cut.
 - Only one-third of high school students get the recommended levels of physical activity.
 - Afternoons are now TV, video games, and the internet.
 - Eight to 18-year olds spend an average of 7.5 hours a day using entertainment media.
 - Families eat fewer home-cooked meals.
 - Trend is toward three snacks.
 - Thus an additional 200 calories a day.
 - 20% of school-age children have up to six snacks a day.



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Obesity: How Did We Get Here?

- Today, habits are different
 - **Portion sizes** have also exploded.
 - They are now two to five times bigger.
 - We are now eating 31 percent more.
 - The average American now eats fifteen more pounds of sugar a year than in 1970.



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<http://hp2010.nhlbi.nih.gov/portion/>

Portion Distortion

Bagel

30 Years Ago	Today
	
3-inch diameter	6-inch diameter
140 calories	350 calories

Guess the calorie difference!

210 calories!

Spaghetti and Meatballs

30 Years Ago	Today
	
1 c. spaghetti with sauce & 3 small meatballs	2 c. spaghetti with sauce & 3 large meatballs
500 calories	1,025 calories

Guess the calorie difference!

525 Calories!

Chocolate chip cookie

30 Years Ago	Today
	
1.5 inch diameter	3.5 inch diameter
55 calories	275 calories

Guess the calorie difference!

220 calories!

Cheeseburger

30 Years Ago	Today
	
333 calories	590 calories

Guess the calorie difference!

257 calories!



Calories in Beverages

- Seem to satisfy appetite less than solid foods.
- Calorie containing beverages can contribute to excessive calories.
- Thus 100% **fruit juice** is limited and **milk** choices are the lower calorie varieties.
- **Water** must be available in the service area.
 - Water pitchers and cups on lunch tables, a water fountain, or a faucet that allows students to fill their own bottles or cups
- And from my weight management class:
 - “Are you eating (hungry) when you are really thirsty?”

The New Standard? "The Stuffed Belly"



How should one feel after a meal?

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Are School Cafeterias 'Restaurants'?

Many principles apply to both, and needed for *Success*.

Restaurant

- Food safety
- Managing people
- Marketing
- Budgets
- Customer wants
- Sanitation
- Accident prevention
- Quality food/service
-

Cafeteria

- Food safety
- Managing people
- Marketing
- Budgets
- Customer wants
- Sanitation
- Accident prevention
- Quality food/service
-

Are School Cafeterias 'Restaurants'?

Priorities are different.

Restaurant

- Profitable menu
-
-
-
- Nutrition
 - Market segment

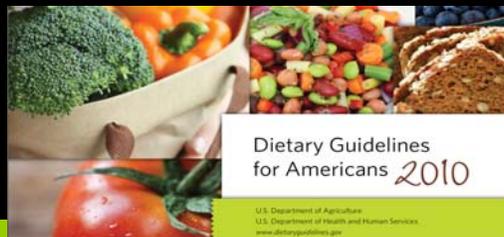
Cafeteria

- Nutrition
- Budget
-
-
-

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Nutrition Standards for School Meals

- Healthy, Hunger-Free Kids Act of 2010.
- Uses **science** to redefine school meals.
- Incorporated many **Institute of Medicine** recommendations.
- Reflects the 2010 **Dietary Guidelines for Americans**.



Significant Nutritional Changes to School Meals

- Increases fruits
- Increases vegetables
- Increases whole-grain rich foods
- Limits fat from milk
- Sets calories
- Controls the amounts of saturated fat, trans fat, and sodium

Changes to School Meals: Focus on Nutrient Dense Foods

- Nutrient dense foods: not 'diluted'
 - From added solid fats, added sugars, added refined starches
- Usually "you know it when you see it"
 - Mini carrots, potato chips, or candy bar?
- Relationship of nutrients to calories
 - Similar to ratios or fractions
 - Nutrients / Calories
 - Many nutrients / few calories = nutrient dense
 - Few nutrients / many calories = not nutrient dense



Changes to School Meals: Nutrient Dense Foods

- Fruit
- Most vegetables
- Most whole grains
- Nonfat milk

Sometimes nutrient density is used to compare foods:

- Nonfat milk is more nutrient dense than 1% milk
 - No doubt both are nutritious
- Whole wheat bread is more nutrient dense than enriched refined white bread

Vegetables



- Low in calories
- Fiber (fills us up, fullness lasts a while)
- Vitamins and minerals
- Phyto-chemicals - responsible for color; health benefits
- Water
- Carbohydrate (preferred energy source) 
- Subgroups provide specific mixes of nutrients
 - **Dark Green** - iron, vitamins A and C
 - **Red/Orange** - vitamins A and C
 - **Beans/Peas (Legumes)** - protein, folate
 - **Starchy** - carbohydrate
 - **Other** - varies



Fruit

- Lower in calories and fat than typical desserts
- Fiber
- Vitamins, minerals, phytochemicals
- Water
- Carbohydrate
- 100% juice, nutritious but.....



Whole Grain-Rich Foods

- Fiber
- Many more vitamins and minerals than enriched grains
- Carbohydrate

“Diets rich in whole grain foods and other plant foods and low in total fat, saturated fat, and cholesterol reduce the risk of heart disease and some cancers.”

- All grains must be **whole grain-rich** SY 2014-15

Milk

- Fat-free (skim, nonfat), unflavored and flavored
- Low-fat 1% unflavored
- New meal pattern significantly reduces saturated fat from beverage milk
 - Gone: Whole, 2%, & Fat-containing flavored milk
 - Now the most chosen milk will be fat-free:
 - Fat-free flavored
- Quality protein, vitamin D, vitamin A, carbohydrate, riboflavin



Other Menu Specifications & Health

- **Sodium:** high blood pressure, heart disease, stroke.
- **Saturated fat:** heart disease, cancer.
- **Trans fat:** heart disease, maybe diabetes.
 - Some researchers think trans fats are worse than saturated fat.

These health issues and dietary components, and obesity are usually interrelated.

Sodium Reduction Efforts

- Procurement specifications and recipes will be modified
- USDA technical assistance and training resources will be available
- **USDA Foods** is reducing sodium in foods available to schools
 - Already reduced for products such as most cheeses
- **Some sectors and companies** in the food and restaurant industries are working to reduce sodium

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Trans Fat

- New trans fat restriction
- Usually found in processed foods like baked goods
- **Nutrition label** or manufacturer's specifications must say **zero grams** of trans fat per serving
 - Less than 0.5 gram per serving
- Begins SY **2013-2014** for School Breakfast
- Naturally occurring trans fat is excluded
 - Meat, dairy products

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Calorie Requirements

GRADE GROUPS	LUNCH	BREAKFAST
K-5	550-650	350-500
6-8	600-700	400-550
9-12	750-850	450-600

- Weekly averages
- If breakfast and lunch are served at school:

GRADE GROUPS	POSSIBLE MAX. TOTALS
K-5	1150
6-8	1250
9-12	1450

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Taken from: **DIETARY GUIDELINES FOR AMERICANS, 2010 | Chapter Two**

Table 2-3. Estimated calorie needs per day by age, gender, and physical activity level

Estimated amounts of calories needed to maintain calorie balance for various gender and age groups at three different levels of physical activity. The estimates are rounded to the nearest 200 calories. An individual's calorie needs may be higher or lower than these average estimates.

		Physical activity level		
Gender	Age (14-18)	Sedentary	Moderately active	Active
Female		1800	2000	2400
Male		2000-2400	2400-2800	2800-3200

<http://www.cnpp.usda.gov/Publications/DietaryGuidelines/2010/PolicyDoc/Chapter2.pdf>

(Earlier)

“Nutrition experts said children still get plenty of protein under the new plan, but teacher Linda O'Connor of Wallace High School in Sharon Springs, KS, says active students, athletes and children who do farm work complain they are hungry by mid-afternoon.”

- WebMD, 9/26/12

Afternoon snacks, Active people (and kids) need between meal snacks!!

Second helpings of fruits and vegetables (school option).

Second carton of milk (school option).

A la carte purchases.

School-operated after school snack & supper programs.

Child/Adult Care Food Program snacks and meals.

Active, Hungry Students, & Athletes

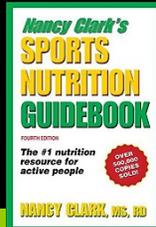
- Active people need to **fuel** all day long, not just 2 or 3 big meals
 - They should include 2 or 3 snacks, mostly healthy foods
 - Smart people **don't put 'junk gas' in their 'fuel tank'**
- **Eat breakfast:** home, school or a backpack breakfast
 - Breakfast is the most important meal of the day for active people, and *ALL* students
 - Backpack breakfast: mini bagel, yogurt, fresh fruit
- Pack-a-Snack
 - Have some easy to carry foods to eat between lunch and afternoon activities, not too many junk foods
- Take fresh fruit not eaten at lunch for later eating:
 - “Athletes can never eat too much fruit.”

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Sports Nutritionists Recommend

- Small meals and many snacks, not large meals
- After exercise, athletes should eat small healthy meal or snack within 30 minutes of exercise to restore energy and re-build muscles at the highest efficiency
- **Coaches:** work with a sports nutritionist
 - RD - Registered Dietitian <http://www.scandpg.org/sports-nutrition/sports-nutrition-who-delivers/>
 - SCAN organization, <http://www.scandpg.org/search-rd/>
 - Great book:

For coaches
& parents



<http://www.nancyclarkrd.com/books/sportsnutrition.asp>

Sports Booster Clubs

- Can sponsor snack programs for athletes
- On school days, offer heavy snacks or light meals for games late in the day

Food-Based Menu

- Components:
 - Fruits
 - Vegetables
 - Grains
 - Milk
 - Meat/meat alternates



Offer Versus Serve

- Students have the opportunity to select three out of the five components to create a reimbursable meal
- Reduces **plate waste**
- Allows **students choice**
- For a reimbursable meal
 - Student must select fruit component OR vegetable component
 - **Student may select ½ cup serving under OVS, rather than the full component**
 - A full component **MUST** be offered to student

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Plate Waste & Younger Students

- More fruits and vegetables may mean the little ones need more time to eat them
- If you see this, share with school administration

Plate waste will always be an issue managers work out with their “customers”

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SMOOTHIES

- Fruit smoothies, **prepared in-house**, may now credit toward both the fruit and milk components.
- Commercial smoothies may only credit toward fruit component.
- All meal components must be offered in the required minimum amounts.
- Must still offer variety of fluid milk choices.
- Additional fruit offerings are encouraged.
- Refer to **memo SP 36-2012**, released 7/11/12.

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<http://www.fns.usda.gov/cnd/governance/Policy-Memos/2012/SP36-2012os.pdf>

USDA United States Department of Agriculture Food and Nutrition Service www.fns.usda.gov/Healthierschoolday

Home About What's New Help Contact Us En Español

You are here: Home > Healthier School Day

The School Day Just Got Healthier

Healthier school meals have **More Vegetables**



Students can expect benefits from *healthier* and more nutritious food in school. Thanks to the **Healthy, Hunger Free Kids Act**, major improvements are being made across the country to transform school food and to promote *better nutrition* and *reduce obesity*. Learn more about the changes, take action with your schools and community, get onboard with this exciting time in school meals!"

Watch First Lady Michelle Obama's Back to School Message

Toolkit
The School Day Just Got Healthier Toolkit is a collection of resources including brochures, fact sheets, FAQs, fliers, school lessons,

Success Stories & Blogs

- Healthier School Days for Students in West Virginia
- Making School Days Healthier in Miami
- Thanks for Making the #AskUSDA School Meals Chat a Success!
- New School Year Ushers in Healthier School Days for Kids
- Fruit and Veggie Tasting Prepares Students for Upcoming School Year

Share your stories and ideas!

Download Campaign Badges

Explains the changes. Share with others.

#schoolfoodrule

Search FNS
Go

- Search all USDA
- Search Tips
- Topics A-Z

Email Updates
Sign-up to receive free email updates

Related Links

- Best Practices Sharing Center
- Center for Nutrition Policy and Promotion
- Chefs Move to Schools
- Farm to School
- Fresh Fruit and Vegetable Program
- HealthierUS School Challenge
- Healthy, Hunger Free Kids Act
- Let's Move!
- Local School Wellness Policies
- MyPlate
- National Food Service Management Institute
- National School Lunch Program
- School Breakfast Program
- School Nutrition

 **Communication is Key**

- Emails
- Press releases
- Newspaper articles
- TV stories
- Radio PSAs
- Newsletters
- Letters to parents
- Blogs
- Tweets
- Contests and challenges
- School events
- Online events
- Website

www.fns.usda.gov/healthierschoolday

USDA United States Department of Agriculture Healthy Meals Resource System

Home About HMRS News Topics A-Z Get Connected Chefs Move to Schools Help Contact Us

Search HMRS

• Search all USDA

• Advanced Search

Best Practices Sharing Center

Welcome to the Best Practices Sharing Center! This collection is intended for School Food Authorities and State Agencies to share resources and tools they use to serve healthy menus that meet school meal regulations.

Select from the options below to search for resources.

Browse by Subject

- Recipes
- Menu Planning
- Best Practices
- Resource Library
- HealthierUS School Challenge Resources
- Farm to School
- Local Wellness Policy Resources
- State Sharing Center
- Professional & Career Resources

Topics

Sodium reduction
Fruits
Vegetables
Whole grains
Meal pattern
Fluid milk
Meat / Meat alternatives
Dietary specifications (calories, sat. fat, trans fat)
Planning tools
Monitoring tools
Promotional materials

Hold the CTRL key to select multiple options.

Formats

Menu
Success story / feedback
Recipe
Checklist
Training material (video, webinar, etc.)
Method of implementation
Handout / Brochure / Poster

Hold the CTRL key to select multiple options.

Audiences

School Food Authority
State Agency

Hold the CTRL key to select multiple options.

Developers

School Food Authority
State Agency

Hold the CTRL key to select multiple options.

New Materials

Menus that Move Cycle
Menus

New School Meal Pattern
Communication Tools

Submit a best practice

Materials may be submitted via email to hmsrs@ars.usda.gov. In the body of the email, please provide the developer name as well as the subject areas, audiences, and format that the resource covers.

<http://healthymeals.nal.usda.gov/best-practices>

To share resources, and ideas to use in food services.

Organizations That Support the New Meal Pattern

Food Research and Action Center http://org2.democracyinaction.org/o/5118/p/salsa/web/common/public/content?content_item_KEY=10493

Academy of Nutrition & Dietetics http://www.eatright.org/Media/content.aspx?id=6442467772#_UGYCh1F_VGE

Robert Wood Johnson <http://www.nhl.gov/press-releases/2012/01/new-usda-school-meal-guidelines-paving-the-way-for-a-healthier.html>

School Nutrition Association (membership password) www.schoolnutrition.org/pr
<https://go.madmimi.com/redirects/1349120671-58c2aa1807fd6ea2387f79d3f2d37e03-93245c6?pa=12015487416>

Center for Science in the Public Interest <http://cspinet.org/nutritionpolicy/back2school.html>

More: http://www.fns.usda.gov/cnd/Healthierschoolday/Support_Statements.htm

Questions and Comments

steve.bergonzoni@fns.usda.gov

The New School Meal Pattern: Nutritional Foundations and Strategies:

Links in the Presentation (handout)

- <http://www.chicagotribune.com/health/sns-r-us-obesity-usbre88h0ra-20120918.0,7166415.story?page=2>
- http://www.npr.org/blogs/health/2010/04/too_fat_to_fight_obesity_and_n.html
- <http://www.nhlbi.nih.gov/health/health-topics/topics/obe/risks.html>
- <https://www.google.com/search?q=obesity+health+risks&ie=utf-8&oe=utf-8&aq=t&rls=org.mozilla:en-US:official&client=firefox-a>
- <http://www.letsmove.gov/> <http://hp2010.nhlbihin.net/portion/>
- <http://www.cnpp.usda.gov/Publications/DietaryGuidelines/2010/PolicyDoc/Chapter2.pdf>
- <http://www.scandpg.org/sports-nutrition/sports-nutrition-who-delivers/>
- <http://www.scandpg.org/search-rd/> <http://www.nancyclarkrd.com/books/sportsnutrition.asp>
- <http://www.fns.usda.gov/cnd/governance/Policy-Memos/2012/SP36-2012os.pdf>
- <http://www.fns.usda.gov/Healthierschoolday>
- <http://healthymeals.nal.usda.gov/best-practices>
- http://org2.democracynation.org/o/5118/p/salsa/web/common/public/content?content_item_KEY=10493
- http://www.eatright.org/Media/content.aspx?id=6442467772#.UGYCh1F_VGE
- <http://www.rwif.org/en/research-publications/find-rwif-research/2012/01/new-usda-school-meal-guidelines-paving-the-way-for-a-healthier-f.html>
- www.schoolnutrition.org/pr (membership password)
- <https://go.madmimi.com/redirects/1349120671-58c2aa1807fd6ea2387f79d3f2d37e03-93245c6?pa=12015487416>
- <http://cspinet.org/nutritionpolicy/back2school.html>
- http://www.fns.usda.gov/cnd/Healthierschoolday/Support_Statements.htm
- steve.berqonzoni@fns.usda.gov