Introduction

Research and experience have shown that school children eat more fruits and vegetables when they can choose what they want from a salad bar. Many schools find additional benefits that include less plate waste, more revenue from school lunch sales, and opportunities to teach by integrating with farm-to-school programs.

Some states and other jurisdictions are worried that letting children serve themselves from salad bars increases risk of food-borne illness. But data from the Centers for Disease Control and Prevention show relatively few outbreaks caused by school salad bars compared to other sources of contamination. By following best practices described in this fact sheet, your children can be safe, healthy, and on the road to a lifetime of good eating habits.

Guidelines and codes

The federal government recommends using salad bars in schools.

Salad bars are a good way of meeting the new federal school lunch requirements for more fruits and vegetables.

The January 21, 2011 USDA policy memo on Salad Bars in the National School Lunch Program "encourages the use of salad bars in school meal programs" and says "self-service salad bars may be used in elementary schools." USDA allows schools to use produce from school gardens.

Can salad bar foods be all or part of a reimbursable meal?

Salad bars by themselves can provide a reimbursable meal if they offer all required foods, including meat or meat alternatives, fruits, vegetables, grains or breads, and milk. Alternatively, you can offer a reimbursable meal that combines fruits and vegetables from the salad bar with line-served hot or cold entrees. In either case, cashiers or other monitors must verify that students end up with food servings in amounts that meet requirements.

State and Local codes

Wisconsin allows self-service salad bars for any students, including those in elementary grades. You can purchase salad bars specifically for young children that are shorter with lower sneeze guards.

Any time you add a new food process, equipment, or a time temperature controlled for safety (TCS) food item, you should involve your state or local health inspector before and during the menu change. The health inspector can help assess food safety risks and identify practices to reduce those risks. When TCS foods are added to the menu, you will need standard operating procedures (SOP) in place to add to your food safety plan.

Wisconsin Food Code must be followed.
http://fns.dpi.wi.gov/files/fns/pdf/fs_wfc09.pdf

What are the benefits of salad bars?

Any safety risk from salad bars must be balanced against the significant benefits. Studies have shown that students will take and eat more fruits and vegetables from self-serve salad bars than when given pre-packaged or staff-served salads. A USDA

memo concluded that "salad bar programs in public schools indicate positive effects on fruit and vegetable consumption." In one California school district, a school salad bar program increased the number of times a day children ate or drank fruits and vegetables from 3 to 4; and mean energy, cholesterol, saturated fat and total fat dietary intakes were significantly lower.

Salad bars can be the centerpiece of a nutrition education program that sets up lifelong healthy eating habits. Rodney Taylor, head of food service in California's Riverside Unified School District says, "We've got farmers and chefs in the classroom, and our entire program teaches kids to be lifelong healthy eaters… We see a big carry over outside the school. Parents tell us their kids want them to change what they buy."

Some schools have increased net income as a result of higher lunch participation and less plate waste. In Wisconsin's Chilton District, once they started serving more fresh fruits and vegetables, lunch participation soared from 40 percent to 80 percent at the high school, reaching 90 percent in the elementary and middle school.

Can salad bars be safe?

Disease organisms can contaminate food at four stages: growing, processing and packaging, preparation in the kitchen, and serving. The risks from the first three are the same regardless of whether the produce is presented in a self-serve salad bar or not. So the important question is whether risk is substantially greater during the serving step if students serve themselves.

Evidence from the U.S. Centers For Disease Control and Prevention (CDC) suggests schools are good at food safety compared with other common settings where kids eat. CDC figures from 1998 to 2008 show that only 3 percent of reported food-borne illness outbreaks occurred in schools, compared with 72 percent in restaurants and 10 percent in private homes.

Of the food-borne illnesses, Norovirus, commonly called "cruise ship disease," is the most common and most likely to be spread by salad bar users. The CDC Foodborne Outbreak Online Database lists 124 confirmed Norovirus outbreaks in schools from 1998 to 2009. Foods responsible include soda, lemonade, cookies, garlic bread, ice cream, sandwiches, chicken nuggets, hamburger, turkey, french fries, Caesar salad, tomatoes, and carrots. Only one out of 124 confirmed outbreaks was attributed to a salad bar.

This indication that salad bars are not a major risk is supported by practical experience – there are thousands of salad bars in schools throughout the country, and school districts serving millions of salad bar meals have not had disease issues. Rodney Taylor in Riverside reports that "between 2002 and now, we served two and a half million salad bar meals in Riverside and have not had any reportable sickness or food-related outbreaks of any kind. When school districts use proper techniques, it doesn't matter if food is precooked, cooked, or raw; if they use good principles there is no risk to the children."

Although it's possible that Norovirus could be transmitted by self-service salad tongs or when children grab food with their hands, the above list of foods contaminated by Norovirus makes it clear the virus is frequently passed by food-service workers with a wide variety of foods. The solution is good training and compliance with hygiene standards by both staff and students.

Food safety procedures

Planning and Standard Operating Procedures

Preparing and serving food in salad bars requires the same care as any other food. Additional care may be needed because most of the produce is raw.

Schools should have a written salad bar plan based on Hazard Analysis & Critical Control Points (HACCP) principles, which include guidelines for purchasing, receiving, storing, rinsing, processing, holding, temperature logging, and serving.

Standard Operating Procedures (SOPs) should include contingency plans to decrease transmission of disease during outbreaks of gastrointestinal illnesses, colds, or the flue. Responses could include prepackaging raw foods or discontinuing self-service. Schools' procedures for monitoring and avoiding allergenic foods should be applied to salad bar food items (for resources, see http://www.nal.usda.gov/fnic/pubs/bibs/allergy.pdf.)

Select fruits and vegetables carefully

Choose vendors who deliver fresh, unblemished fruits and vegetables that are properly dated, labeled, packaged and transported. Kitchen staff should examine and reject food that is old, over-ripe, or damaged. Produce from school gardens may not be as well labeled as produce from commercial sources.

Therefore, mark such harvested produce clearly as coming from the school garden, and do not mix school-garden produce with that from other sources. If you expect to use produce from school gardens or local farms, see the Wisconsin Farm to School Toolkit for School Nutrition Programs and Producers: http://www.cias.wisc.edu/toolkits/ .

After receipt, store produce immediately in a pantry or cold storage, as appropriate for the type of food. Dry storage should be away from chemical products. Cold storage in refrigerators or coolers should be away from raw meat and poultry. Store produce at least six inches off the floor.

Wash hands and use gloves

The single most important tool we have to prevent food-borne illness is proper hand washing. Kitchen staff know this is important, but supervisors should emphasize that hand washing is even more critical when handling uncooked produce.

Keep nails short and wash hands for at least 20 seconds with soap and water before handling fresh produce. Hand sanitizers can be effective when used after hand washing, but are not a substitute.

Because kids will be eating many of the salad bar items as "finger food," they must come to lunch with properly cleaned hands. Ideally, the school will set aside time for hand washing before lunch. The school can enlist parents by asking them to teach good hand washing practices at home.

Use only gloves or a clean utensil to touch salad-bar produce – no bare hands. Wash your hands before putting on gloves, and change gloves when they may have been contaminated. Also change gloves when changing tasks, such as when moving from handling raw meat to raw produce to ready to eat foods.

"Shower, never bathe" fruits and veggies

Because food-borne pathogens spread easily from one fruit or vegetable to others if they are soaked in water, always wash fresh fruits and vegetables under a running tap before they are cut, processed, served or eaten.

- You do not need to rewash packaged produce labeled "ready-to-eat," "washed," or "triple washed.
- Wash all other produce - even those with skins and rinds that will not be eaten (e.g., bananas, melons, pineapple).
- Rub or scrub firm-skin fruits and vegetables under running tap water.
- Dry fruits and vegetables with a clean cloth towel or paper towel.
- Never use detergent or bleach to wash produce.
- Chemical washes, if used, must be approved for use on foods.

Avoid cross-contamination

In the kitchen: Always separate raw foods from ready-to-eat and cooked foods. Store and prepare each type of produce, such as carrots and cucumbers, separately. Use newly cleaned cutting boards and knives for each different type of produce. Rinse, sanitize, and air-dry kitchen tools, containers and

surfaces that come in contact with produce before using them again.

At the salad bar:

- Use separate utensils for each container.
- Use long-handled tongs so it is harder for kids to drop the handle into the serving container.
- Be sure to change out utensils at least every four hours, and any time you change out the food container.
- Change utensils as soon as they have been dropped, placed in the wrong container, or if someone has touched the food contact end.
- Provide a clean plate to students returning for seconds.
- Never add food to a partially full container on the salad bar and replace food containers when they are empty or have been contaminated.

- Monitor salad bars to prevent students from ducking under sneeze guards, touching food with their hands, returning food, using utensils in more than one food container, or taking unmanageable portions.
- Use reminder signs (more pictures than words) to help students remember their salad bar manners.

After meal service: Clean and sanitize the entire salad bar at the end of each day's meal service.

Hold foods safely at proper temperature

Keep fresh fruits and produce at or below 41°F.

Keep time and temperature logs for all salad bars items. To minimize waste, use smaller or half-full containers of protein-containing foods, less popular items, or items selected in smaller portions.

Turn on refrigerated salad bars in advance to ensure they are fully chilled before adding food. If non-mechanical units are allowed and if you are using time as a public health control, you must get prior approval from your local health department. You should develop written SOPs that include a list of TCS foods for which time will be used, personnel responsible for checking and logging food temperatures, procedures for ensuring proper temperatures, and guidelines for how long food can remain on a salad bar before being discarded.

After salad bar items have been cut or otherwise prepared, they must be put back into refrigeration and re-chilled to 41°F or below before being put out for service.

Potentially hazardous food, such as cut melons, ready-to-eat meats, and cottage cheese, should always be kept at 41°F or below.

Leftovers

Leftover food from the salad bar **may not be saved**. Prepared food that was not put on the bar can be held and used for up to two or three days from preparation, provided it was properly covered, dated and kept at the proper temperature.

Educate food service staff, students, and teachers

Train both servers and users before the salad bar opens for the first time. Continue to teach and review proper procedures and etiquette once your bar is in use. Because adults are role models, make sure lunchroom supervisors, teachers, and volunteers are well trained and compliant.

In the kitchen: Provide training for all food service staff on how to prepare and serve fresh produce. Discuss salad bar maintenance, cleaning, monitoring and other changes to the mealtime routine. Make sure food servers know what to do when they observe possible contamination.

In the classroom: A teacher or a food server can teach children salad-bar manners and let them try new foods. A taste test in the classroom often makes kids more likely to try new foods. If they are worried

about not liking a new food, tell them they can just try a tiny sample.

Show kids how to use utensils properly (no hands!) and how to stay behind the sneeze guard. Some schools have had great success by wheeling a demonstration salad bar into the classroom.

At the salad bar: Use signs with pictures to remind students about salad bar manners, and provide adequate monitoring in case they forget. Some schools put an antimicrobial hand-wiping station before the salad bar to reinforce the importance of hygiene. Also, signs including pictures should be used to identify food items and proper portion sizes.

At home: Send information home to parents about the salad bar and new foods. Discuss the salad bar and new menu at parent/teacher meetings and conferences.

Will we need new equipment?

You can devote part of your existing line to self-service salad offerings, provided there are cold wells and sneeze guards at the right height for the kids. Many schools are unable to give up space on the line needed for other foods and opt for standalone salad bars.

Standalone bars can serve twice as many children at once because they can be accessed from both sides. You may use either mechanically cooled units or salad bars cooled with cold packs, using time as a safety control.

Some schools with stand-alone bars only use one side because it makes it easier for food service staff to monitor or help students. A one-sided salad bar also will remove the temptation for students to reach across the nearest food trays to the other side.

Schools can apply for free salad bars at http://saladbars2schools.org

Golden Rules for Kids

- Always wash your hands first.
- Use utensils. Never use your fingers.
- If a utensil or plate falls on the floor, don't put it back. Tell a cafeteria person.
- Don't taste food items at the salad bar.
- When trying new foods, take a small amount the first time.
- Take only what you can eat.
- Don't bring food back to the salad bar.
- Don't put your head under the sneeze guard or food shield.
- Ask a friend or a cafeteria person to help if you can't reach.
- Always be polite in line. Wait your turn.
- Always use a clean plate for seconds.

For more information, see:

Minnesota Department of Health, *Let's Move Salad Bars to School* website and resource page, www.health.state.mn.us/divs/hpcd/chp/cdrr/nutrition/FTS/saladbars-schools.html

National Food Service Management Institute's *Best Practices: Handling Fresh Produce in Schools,* www.fns.usda.gov/cnd/ffvp/bestpractices.pdf

U.S. Department of Agriculture. Fresh Fruit and Vegetable Program Handbook, www.fns.usda.gov/cnd/FFVP/Resources/FFVPhandbookFINAL.pdf

Fruits & Vegetables *Galore: Helping Kids Eat More,* U.S. Department of Agriculture, Food and Nutrition Service. http://teamnutrition.usda.gov/Resources/fv_galore.html

Tricks of the Trade: Preparing Fruits and Vegetables from Salad Bars Galore. United States Department of Agriculture, Food and Nutrition Service, FNS-365, February 2004. http://www.fns.usda.gov/tn/resources/tricks_trade.pdf

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Photo credits:

Photos of child ducking head in salad bar and kids using salad bar courtesy of Michelle Stern, What's Cooking with Kids, www.whatscookingwithkids.com.

Hand washing photo courtesy of Michigan State University.

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Individuals who are deaf, hard of hearing or have speech disabilities may contact USDA through the Federal Relay Service at (800) 877-8339; or (800) 845-6136 (Spanish).

For any other information dealing with Supplemental Nutrition Assistance Program (SNAP) issues, persons should either contact the USDA SNAP Hotline Number at (800) 221-5689, which is also in Spanish or call the State Information/Hotline Numbers (click the link for a listing of hotline numbers by State); found online at http://www.fns.usda.gov/snap/contact_info/hotlines.htm.

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