BRAIN FOOD – SMART SNACKS

FRESH FRUITS:
- Orange Smiles
- Apple Quarters
- Melon Slices
- Apricots
- Cherries
- Bananas
- Kumquats
- Grapes
- Blueberries
- Tangelos
- ANY!

CANNED FRUITS
- Avoid Ones Packed in Syrup
- Pineapple (in its own juice)
- Unsweetened Apple Sauce

(tasty by itself, and also delicious mixed with nonfat, plain yogurt)

RAW VEGETABLES:
- Cherry Tomatoes
- Chunks of Jicama
- Baby Carrots
- Radishes
- Cucumber Spears
- Avocado Slices
- Celery Sticks (with or without unsweetened peanut butter filling)
- Fresh English Peas in the Pod
- Snap Peas
- Parsley
- Baby Turnips
- Sliced Turnips
- Cabbage Leaves (peel whole leaves instead of cutting to avoid browning)

LIGHTLY STEAMED VEGETABLES:
- Broccoli *
- Cauliflower *
- Brussel Sprouts *
- Asparagus Spears
- Zucchini
- Mushrooms

(* These veggies should not be cut far in advance)

DRIED VEGETABLES:
- Dried Green Peas
- Dried Tomatoes
- Squash Slices
- ANY!

DRIED FRUITS:
- Raisins
- Prunes
- Dates
- Berries (if no sugar added – avoid most dried cranberries)
- Apricots
- Mango Slices
- Apple Slices
- Pears
- 100% Fruit Snacks (avoid if not 100%)

NUTS & SEEDS:
- Almonds
- Walnuts
- Cashews
- Peanuts

(These can be roasted or raw, unsalted or lightly salted. Avoid "honey roasted.")
- Seeds – Sunflower (out-of-the-shell, please), Sesame.

WHOLE GRAINS:
- Crackers (not overly sweetened & low in salt)
  - Low-Salt Triscuit®
  - Ry-Vita®
  - Barbara's Brown Rice Crackers®
  - Kashi®

  (® These are some examples of locally-available products we have found that have whole grains without extra sweeteners. There might be other options also.)
- Sprouted, Whole Grain English Muffins
- Sprouted Corn Tortillas

OTHER SMART SNACKS:

- Low-Fat String Cheese
- Turkey Jerky
- Air-Popped Popcorn (with or without nutritional yeast topping)
- Trail Mix (avoid those with chocolate pieces and sugared dried fruit, etc.)
- Hummus with Whole Grain Pita Bread, Jicama Chunks or Crackers)
- Salsa with Baked Tortilla Chips, Fresh Veggies or Pita Bread
- Whole-Grain, Baked Pretzel Sticks

COOL, SWEET & SENSIBLE:

- Smoothies: Blend nonfat, plain yogurt or water with fresh or frozen fruit. Add ice for an extra chill.
- Home-made or Commercial No-Syrup Added Frozen Fruits:
  - Berries
  - Peach Slices
  - Cherries
  - Banana "Popsicles" (peel a banana & wrap it in a clean cloth before freezing)
- Frozen 100% Fruit Juice Pops
  - Pour fresh, 100% fruit juice into popsicle molds and freeze. No molds? Pour the juice into ice cube trays, cover tightly with plastic wrap, stick a toothpick through plastic into each section and freeze.

DESERVING DESSERTS:

- Home-Made Pumpkin Bread (use at least 2/3 whole wheat flour & 1/3 or less white flour)
- Home-Made Banana-Nut Bread (use at least 2/3 whole wheat flour & 1/3 or less white flour)
- Parfaits – Top nonfat, plain yogurt with low-fat granola and fresh fruit
- Banana Split Twist – Assemble like a traditional banana split, but replace the ice cream with nonfat, plain yogurt and top with shredded coconut, low-fat granola crumbles, or nuts in place of sugary syrups.
- 100% Fruit Sorbet with no added sweeteners

THOUGHTFUL THIRST QUENCHING:

- Water, Water Everywhere, and Plenty to Drink! Nature's Perfect Beverage – Use a filter to improve the taste of tap water.
- Fanciful Punch: Mix equal parts of Club Soda or Unsweetened Mineral Water and 100% Fruit Juice. For an extra fancy touch, float some orange, lemon or lime slices.

How can I tell if a snack item is compliant with the new guidelines for schools?

Calories should not be more than **175** *total in the food item* for Elementary students, and not more than **250** *total in the food item* for Middle and High School students. This item has too many! Remember – 2 servings per container here, so 500 total!

Saturated Fat should not be more than **10%** of the **total calories** of the food item. To figure this out, determine the Saturated Fat calories. This can be tricky, as it's often shown in weight, as it is here (3 grams). **1 gram of fat = 9 calories**. So, for this example, there are 27 fat calories per serving (3x9=27). Since there are 250 calories per serving, divide the saturated fat calories (27) by the total calories (250); in this case that equals .11, or 11%. This product is too high in Saturated Fat!

All food labels list the product's ingredients in order by weight. The ingredient in the greatest amount is listed first. The ingredient in the least amount is listed last. So, to choose foods low in any particular ingredient (ex. fat or sugar), limit your use of products that list those ingredients first or close to first in the list--or that list many of those ingredients.

INGREDIENTS TO AVOID:

- **Trans Fat**
- **Hydrogenated & Partially Hydrogenated Oils**
- **High Fructose Corn Syrup**
- **Artificial Colors & Flavors**

INGREDIENTS TO MINIMIZE:
(should be towards the end of the list)

- **Salt**
- **Sodium**
- **Sugar**
- **Maltose**
- **Dextrose**
- **Sucrose**
- **Natural Flavors**

Nutrition Facts

Serving Size 1 cup (228g)
Servings Per Container 2

	% Daily Value*
Total Fat 12g	18%
Saturated Fat 3g	15%
Trans Fat 3g	
Cholesterol 30mg	10%
Sodium 470mg	20%
Total Carbohydrate 31g	10%

Amount Per Serving

Calories 250 Calories from Fat 110

Dietary Fiber 0g	0%
Sugars 5g	
Protein 5g	

Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%

* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

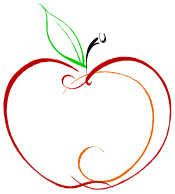
The size of the serving on the food package influences the number of calories and the weight of nutrients listed on the top part of the label. **Pay attention to the serving size, especially how many servings there are in the food package.** In this example, all of the numbers need to be doubled, as there are *two* servings per container.

Calories from Fat should not be more than **35%** of the total **calories** in the food item. To figure this out, take the Calories from Fat (110 here) and divide it by the Calories (250 here). In this sample, it equals .44, or 44%. This one is too high!

Sugars should not be more than **35%** of the total **weight** of the food item. To figure this out, take the weight of the Sugars (5 grams here) and divide it by the Weight of the Serving Size (in this example, 228 grams). 5 grams divided by 228 grams equals .02 grams, or 2%. This item has an acceptable amount of Sugars.

When analyzing a food item for SB12 compliance, be certain to look at the **percentages of total weight and calories NOT the % of Daily Value**. The % of Daily Value shows the USDA recommended maximums for Fats, Cholesterol and Sodium, and recommended minimums for Carbohydrates and Vitamins. This is different from the guidelines set for snacks at schools.

INGREDIENTS: CULTURED GRADE A REDUCED FAT MILK, APPLES, HIGH FRUCTOSE CORN SYRUP, CINNAMON, NUTMEG, NATURAL FLAVORS, AND PECTIN. CONTAINS ACTIVE YOGURT AND L. ACIDOPHILUS CULTURES.



Adapted from U.S. Food and Drug Administration: Center for Food Safety and Applied Nutrition "How to Understand and Use the Nutrition Facts Label." For more detail, refer to: www.cfsan.fda.gov/~dms/foodlab.html

About Pre-Hypertension, Pre-Diabetes, and Climbing Health Mountain

One in three U.S. Children born in 2000 will become diabetic unless many more people start eating less and exercising more.

Assoc. Press 6/13/03

Type II Diabetes in adolescents increased 10-fold between 1982 and 1994.

J. Pediatrics 1996

When you have pre-diabetes, pre-hypertension, or both, there are three possible paths ahead of you:

PATH #1:

Eat a typical convenience diet (full of salt, sugar, animal fat, and processed foods), do a lot of sitting, and don't seek treatment from a doctor. Develop full-blown diabetes and hypertension and leave them uncontrolled.

At first you'll feel a little sluggish and forgetful, but not actually sick. After some years, boom! This path leads to foot pain, trouble seeing, heart attacks, strokes, needing to be on dialysis, and other things that can be very uncomfortable or make you die young.

PATH #2:

Eat a typical convenience diet, do a lot of sitting, and get pills from the doctor to force your blood pressure, blood sugar, and blood cholesterol levels down despite your lifestyle. Develop full-blown diabetes and hypertension, but control them the high-tech way. (A typical medication combo would be *metformin*, *glyburide*, *rosiglitazone*, *enalapril*, *metoprolol*, *atorvastatin*, and *ezetimibe* --- around ten pills a day.)

You'll feel pretty good except when you have side effects from the drugs. You'll be quite busy with doctor visits, blood and urine tests, heart tests, eye exams, trips to the pharmacy, and whatever you have to do to pay for (or convince your insurance to pay for) hundreds of dollars of medication per month.

PATH #3:

Switch to a diet full of fresh vegetables, beans, fruits, whole grains, nuts, seeds, and occasional nonfat dairy products or fish. Make time to exercise and play every day. Get rid of the pre-diabetes and pre-hypertension before they have a chance to get full-blown. This is the path up "Health Mountain."

This path can help you feel great! Once you are used to it, you can expect to feel more energetic and to have better memory, better concentration, and a better chance of a long life with low medical bills.

Many, many school-children have pre-diabetes and pre-hypertension. Many of them don't know it. Let's give them a chance!

Path #3 helps you:

- **Learn new things**
- **Pay attention in class**
- **Get higher test scores**
- **Enjoy teamwork with your classmates**

Healthful eating (a diet low in chemical additives, sugar, salt, animal fat and trans fat, and high in vegetables, legumes, whole grains, fresh fruit, nuts and seeds) and exercise also help you:

- Prevent and fight many types of cancer
- Prevent and fight viral, bacterial and fungal infections
- Prevent and heal many types of arthritis
- Keep bones strong
- Prevent many types of intestinal problems
- Have a healthy baby (if you become a parent)
- Sleep better

Even minor nutrient deficiencies affect academic performance.

Prepared by Jennifer Kreger, M.D.

Benefits of Brain Food

Healthy Kids Learn Better: Research clearly demonstrates that good nutrition is linked to better behavior and academic performance. To provide the best possible learning environment for children, schools must provide an environment that supports healthy behavior.

Provides Consistent Messages: Providing only healthful foods at school demonstrates a school commitment to promoting healthy behaviors. It supports the classroom lessons students are learning about health, instead of contradicting them. Allowing only healthful food choices at school promotes positive lifestyle choices to reduce student health risks and improve learning.

Promotes a Healthy School Environment: Because children spend approximately one-third of their day at school, schools play an important role in children's ability to get enough nutrients. Health and education leaders agree that one of the most critical steps to helping children practice healthy eating habits is to establish policies and programs that increase access to healthful foods and beverages.

The Children's Health Depends On It: Most children do not eat enough fruits, vegetables or whole grains. The growing epidemic of overweight children is due to poor diet and physical inactivity, putting growing numbers of California children at risk for type 2 diabetes, hypertension, heart disease, and cancer *(For more information, please refer to the "About Pre-Hypertension and Pre-Diabetes" handout)*. By providing students with nutritious choices wherever food is available, schools can positively influence children's eating habits and health.

Benefits of Healthful Celebrations

But It's Just a Cupcake… Typically, foods for school celebrations include cupcakes, candy, cookies and soda. So what's the harm? There is nothing wrong with an occasional treat, but unhealthy choices have become the norm rather than the exception. Parties, treats used as classroom rewards, food fundraisers, vending machines, and snacks constantly expose children to high-fat, high-sugar, low-nutrient choices. Constant exposure to low-nutrient foods makes it difficult for children to learn how to make healthy food choices. By providing students with nutritious choices wherever food is available (including the classroom) schools can positively influence children's eating habits.

Healthy Kids Learn Better: Research clearly demonstrates that good nutrition is linked to better behavior and academic performance. To provide the best possible learning environment for children, schools must provide an environment that supports healthy behavior.

Provides Consistent Messages: Providing healthy classroom celebrations demonstrates a school commitment to promoting healthy behaviors. It supports the classroom lessons students are learning about health instead of contradicting them. Healthful celebrations promote positive lifestyle choices to reduce student health risks and improve learning.

Promotes a Healthy School Environment: In order to positively change eating behaviors, students need to receive consistent, reliable health information and ample opportunity to use it. Schools can help promote a positive learning environment by providing healthy celebrations that shift the focus from the food *to the child*.

Creates Excitement About Nutrition: Children are excited about new and different things, including fun party activities and healthy snacks. So, school staff and parents need not worry that children will be disappointed if typical party foods aren't served in the classroom. Healthy celebrations will become traditions in time.

The Not So Sweet Facts About Sugar

Refined sugars of all kinds are highly processed using chemicals (chlorine, phosphoric acid, calcium phosphate, and bleached with a solution that uses animal by-products), typically genetically modified and pesticide laden (corn, beet, rice) and concentrated to levels of fructose and sucrose not found in nature.

Our brains require sustained glucose, but refined sugars (and even refined starches like white rice that convert to sugar) cause a surge in insulin release, which drives glucose out of the blood and *away* from the brain. Insulin is a pancreatic hormone that stores dense sugars (once seasonally found in nature; fruit, tree syrups/nectars and whole sugarcane). When sugar is absorbed into the bloodstream, insulin is released to convert it to glycogen. Glycogen is a neat energy package that is stored in the liver and skeletal muscles for later use. If glycogen stores are full, glucose is then stored as fat cells. The number of fat cells in your body is set in childhood up to adolescence and remains constant throughout life. Sugar storage depends on how much sugar is used up in exercise and how much excess remains.

When blood sugar becomes low (lack of food) for long (after about 4 hours), the adrenal glands activate the liver to release stored glycogen, which provides fuel. Frequent concentrated sugar consumption is followed by ever higher insulin release, which causes low blood sugar. Extremes in eating concentrated sugars can lead to the body's cells becoming resistant towards insulin, so that eventually both blood sugar and blood insulin remain high = diabetes. For children especially, concentrated sugars deplete a developing immune system: 6 teaspoons of sugar can lower white blood cell count by 25% for up to 6 hours, a significant lowering of resistance to viruses, bacteria and other pathogens. Sugar also interferes with the absorption of calcium, zinc, magnesium, copper, chromium and B vitamins needed for growth.

Top culprits are soft drinks ("sugar free" contain neurotoxins), "fruit drinks", "beverages/ades", and most sweet baked goods, candy, ice cream, sugary cereals and products that are "fat free". There is also plenty of hidden sugar in packaged lunchmeats, chips, crackers, yogurts, energy bars, pizza etc. **You can quickly assess the sugar content in packaged food by reading the labels**. There is 1 tsp of concentrated sugar to every 4 grams listed, so take the number of grams under "sugars per serving", then divide that number by 4 to calculate the number of teaspoons of sugar it contains. For instance, a listing of 24gm sugars is equivalent to 6tsp of sugar per serving. Then multiply by number of servings if necessary.

Facts and Resources

- Diabetes (type 1 and 2) is one of the top health problems in the USA today effecting nearly 10% of the population with obesity correlated for 85% of those cases and 1 out of 400 youth under the age of 20 are part of those statistics. http://professional.diabetes.org/admin/UserFiles/0%20-%20Sean/FastFacts%20March%202013.pdf

- Sugar lowers immunity and feeds cancer cells, in fact high sugar consumption increases risk of many cancers http://drsircus.com/medicine/cancer/sugar-cancer-growth-research

- Sugar tips the acid/base balance of the blood to acid, furthering compromising the immune system and aggravating arthritis, asthma, candida yeast overgrowth, and high cholesterol. http://www.blackherbals.com/ASK-Sugar.htm

- Sugar can worsen the symptoms of children with attention deficit hyperactivity disorder (ADHD) http://www.additudemag.com/adhd/article/2861.html

- Sugar increases estradiol (the most potent form of naturally occurring estrogen) in men of all ages.

- Sugar disturbs electrolyte balance and attributes to kidney stone formation and gout. It tends to rob the body of chromium, zinc and calcium, vitamins C and B-complex, which can weaken bone formation. http://nancyappleton.com/141-reasons-sugar-ruins-your-health/.

- Added sugars increase the risk of tooth decay and heart disease later in life. http://www.mayoclinic.org/healthy-living/nutrition-and-healthy-eating/in-depth/added-sugar/art-20045328?pg=2

- While all sugars contribute 4 calories per gram, some foods contain more concentrated sources of calories than others. For example, a teaspoon of table sugar contains 16 calories. One teaspoon of honey contains 22 calories, while a teaspoon of orange juice or applesauce has just 4 calories (plus vitamins, minerals, and fiber). All of these represent 4 gm of sugar.

Why Plenty of Exercise?

- Children with daily vigorous physical activity exhibit better attendance, a more positive attitude to school, reduced disruptive behavior, and superior academic performance.

- Obesity and overweight have reached epidemic proportions in the United States. It is currently predicted that one in three U.S. children born in 2000 will become diabetic due to poor diets and lack of exercise. See the "About Pre-Hypertension and Pre-Diabetes" handout for more details.

- Prevention is the key to fighting cardiovascular disease, cancer, Type 2 diabetes, and other chronic diseases – and helping students increase physical activity is one way to put prevention into action.

Ideas for Physically Active Families:

- **Walk and Talk:** Instead of sitting at the table to do homework, take a walk with your child while practicing spelling words, multiplication tables or geography facts.

- **Household Jobs:** Encourage responsibility and home maintenance skills by having your child help vacuum, scrub floors, mow the lawn, walk the dog, wash the car, and more.

- **Indoor Fun:** Designate a space where kids can roll, climb, jump, dance and tumble. Garages – without cars – can become an activity zone on rainy days.

- **Traveling Locker Room:** Stash a box in the family car that holds balls, baseball gloves, jump ropes, a Frisbee, kites, etc. You'll always be ready for some active family fun!

- **Family Adventures:** See the sights of our community. Try hiking, fishing, kayaking, boogie-boarding, a brisk walk on the beach, bicycling and berry-picking. Visit our many State Parks.

- **The Gift of Physical Activity:** Give a present that encourages activity. Outfit that special someone with a nice raincoat to allow outdoor adventure even when wet, or a sturdy pair of hiking boots to explore our forests in. Select toys that make kids move, such as a basketball or bicycle.

- **Community Service:** Benefit others while benefiting yourself – volunteer as a family. Do litter patrol on a nearby road, help neighbors clean up their yards, pitch in at one of our school gardens, or walk an elder neighbor's dog for them.

- **Seasonal Celebrations:** Welcome each one with active fun!

    - **Winter:** Walk the beaches in search of whales. Head a little east and build a snowman. Enjoy activities provided by the Parks and Recreation Department.

    - **Spring:** Play whiffle ball, fly a kite or ride your bike down the haul road before all the tourists come. Double-dig a garden bed.

    - **Summer:** Run through the sprinklers, hike under the cool redwoods or jump rope.

    - **Fall:** Play Frisbee golf, explore a pumpkin patch or help a gardener with her/his harvest.