



What You Need to Know...

Sugar, Carbs & Sodium

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Diabetes in Youth



- Most common disease in school aged children
 - 186,300 youth in 2007 have diabetes

- Type 1 – was leading cause of diabetes in children
 - 15,000 new US youth diagnosed a year in 2002-2003

SEARCH for Diabetes in Youth Study Group: Incidence of Diabetes in Youth in the United States. JAMA 2007; 297 (24): 2716-2724.

Diabetes in Youth

- Type 2 – increasing with increase in obesity
 - 3,700 new diagnosis a year in 2002-2003
 - Estimated that 50% of all new diagnosis are Type 2
 - Highest rates with minority populations

Diabetes in Schools



- Children need to manage their diabetes at school as they do at home.
- Each student will have different needs.
- Type 1 & Type 2 have different needs.

Diabetes

Type 1

Nutrition Management
Physical Activity
Blood glucose testing
Insulin administration
Avoidance of hypoglycemia

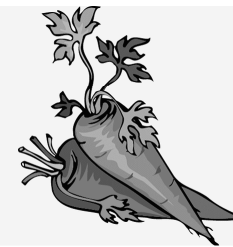
Type 2

Nutrition Management
Increased Physical Activity
Blood glucose testing
Oral medications or Insulin
administration
Weight reduction

Your Role

- Controlling portion sizes
- Making healthy food choices
 - Whole grains
 - Fruits & Vegetables
 - Low fat dairy
 - Water
- Including activity
 - 60 minutes a day

No Single Plan - Individualize



Carbohydrates

- Grains, starchy foods – peas, corn, potatoes
- Fruits
- Milk – Yogurt
- Sugar

Read labels for grams of Total Carbohydrates

If using choices - 15 grams equals 1 carb choice



Celiac Disease

1 in 133

Americans have Celiac Disease

Fasano A, Berti I, Gerarduzzi T, Not T, Colletti RB, et al. Prevalence of celiac disease in at-risk and not-at-risk groups in the United States: a large multicenter study. *Arch Intern Med*, 2003;163:286-292.

Celiac Disease Diagnosis

- Diagnosis increased 4 fold
from 2003-2007
- Auto immune disease
like Type 1 diabetes
- Adults typically have symptoms
for 11 years before diagnosis

Treatment Options

Only treatment for Celiac disease is

FOOD

What Can I Eat?



- **27,000 Gluten Free foods launched since 2006**
- **\$4.3 Billion industry over the next 5 years**

Mintel Global New Products Database

The Future of Gluten-Free: Consumer Insight and Public Opportunities

All Fruit



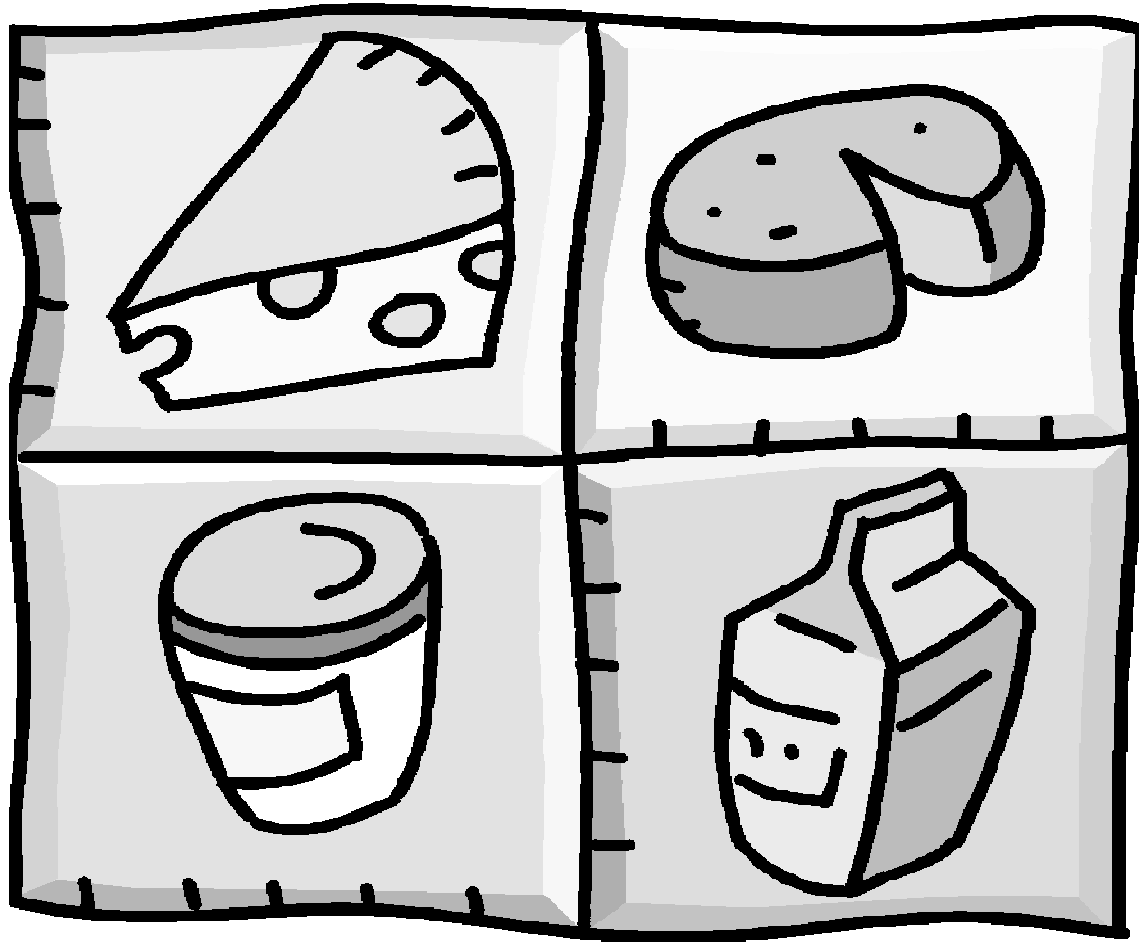
All Vegetables



All Plain Meats



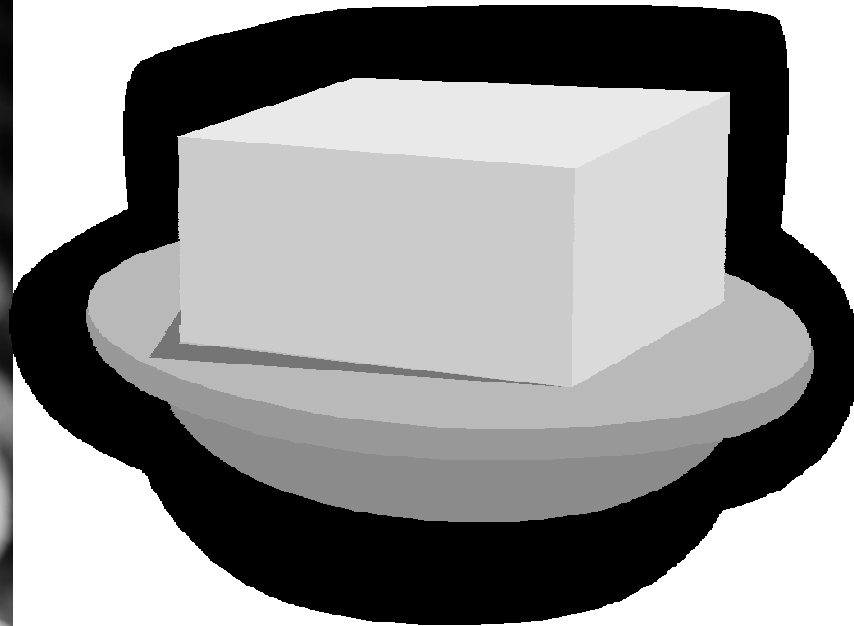
Milk-Yogurt-Block Cheese



Fats



Nuts



Butter & Margarine

Grains



Rice



Oatmeal



Popcorn

What Can't I Eat?



Wheat

Barley

Rye

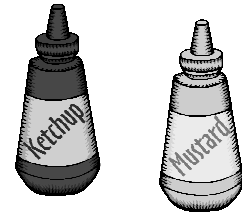
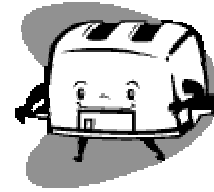
Label Reading

- 2006 Labeling laws require **wheat** to be labeled
- Gluten is not required yet, so read ingredient lists for:
 - barley
 - malt
 - malt flavoring
 - malt vinegar
 - Rye



Cross Contamination

- Dedicated toaster
- Squeeze bottles
- Prepare gluten free first
- Meat slicers need to be cleaned



Your Role

- Read labels.
- Prevent Cross contamination.
- Be positive!!!

They can eat!



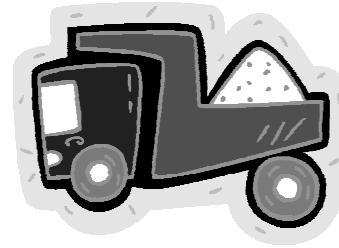
Health Risks with Sodium

- Increased Blood Pressure/Hypertension
- Heart Disease
- Kidney Disease

Reducing sodium could prevent more than 100,000 death annually according to Jane E. Henney, MD, chair of the Committee on Strategies to Reduce Sodium Intake at the the Institute of Medicine.

Sodium

- Unhealthy amounts of sodium in our diet
 - Ave intake >3400 mg



- Dietary Guidelines <2300 mg
 - Encouraged consumers to avoid salt at the table



2008

- Congress asked Institute of Medicine to reduce sodium intake
 - < 2300 mg/day for 2 years & older
 - < 1500 mg/day for people over 40, black or with high blood pressure.
- Flavor, Safety, shelf life, functionality, acceptability

- New York City of Health and Mental Hygiene. Cut the Salt. Get the Facts. The National Salt Reduction Initiative. April 2010. Available at <http://www.nyc.gov/html/doh/downloads/pdf/cardio/cardio-salt-nsri-faq.pdf>. Accessed October 2, 2010.

Sodium



- Require new government standards
- Manufactures & restaurants need to comply
- Gradually reduce sodium

Sodium



Institute of Medicine

- Recommended Strategies Released 4/20/10
- Reduce the sodium content of processed food
- Restaurants/foodservice to reduce salt added to menu items
- Revisit GRAS status of food additives

Institute of Medicine

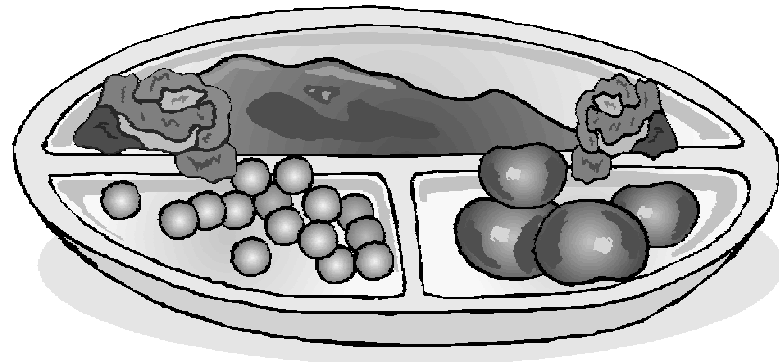
- Voluntarily reduce sodium until implementation of mandatory regulations
- Collaboration to reduce sodium in foods
- FDA to revisit health claims & labeling
- Facilitate & sustain reducing sodium in menu items

Institute of Medicine

- Participate in activities in reducing sodium intake
- Organize a campaign to achieve goals of the Dietary Guidelines for Americans
- Data in user friendly formats
- Congress, CDC, USDA need adequate funding

Sodium in School Lunch

- USDA/FNS 2007
 - 43% in combination entrees
 - 17% in accompaniments
 - 12% in grains
 - 11% in vegetables



Your Role

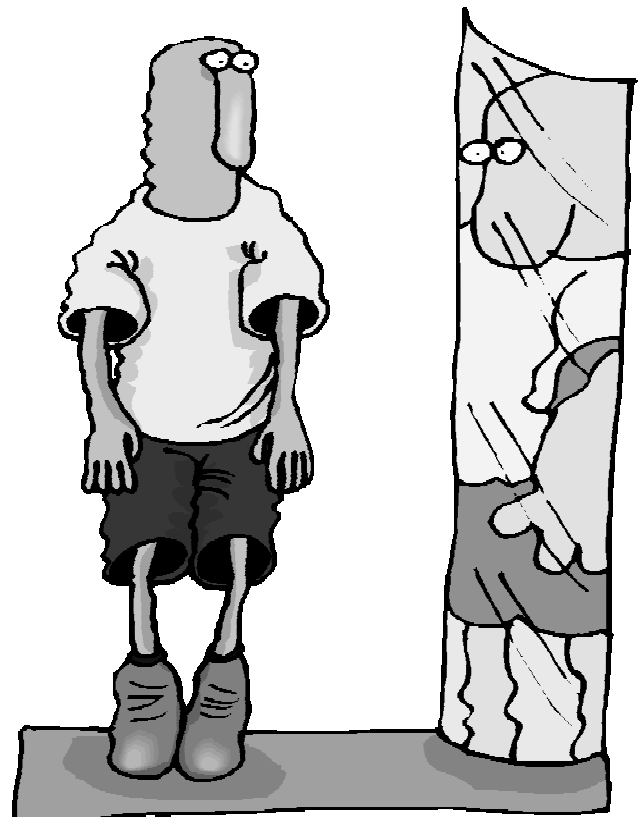
- Increase local food preparation
- Decrease processed foods
- Fresh fruits & vegetables
- Frozen vegetables
- Gradual reduction for acceptance with target goal date of 2020



Obesity

- One-third of all children are overweight or obese
 - 17% obese
 - 16% overweight

School Meals: Building Blocks for Healthy Children
<http://www.nap.edu/catalog/12751.html>



Health Risks

- Blood Pressure
- Joint Pain
- Osteoporosis
- Diabetes
- Cancer
- Heart Disease
- Lack of self confidence
- Ridicule
- Tooth Decay

Sugar

- Average American consumes 2-3 lb a week
- In the past 20 years we have increased from 20 lbs to 135 lbs of sugar per person per year
- Lacks vitamins & minerals
- 12 oz can pop = 10 teaspoons sugar (~1/4 c)

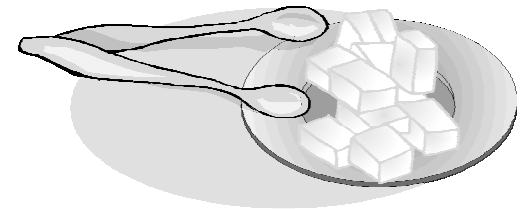
Sugar Limits

- No specific limit on added sugars because not listed on nutrition labels
- Believed that the calorie limits will self limit sugar



High Fructose Corn Syrup

- All are interchangeable from a composition, nutritional, metabolic standpoint.
 - Sucrose
 - Invert sugar
 - Honey
 - Fruit Juice Concentrate
 - HFCS



- White, John. Misconceptions about High Fructose Corn Syrup: Is It Uniquely Responsible for Obesity, Reactive Dicarbonyl Compounds, and advanced Glycation Endproducts? *The Journal of Nutrition Supplement*; 2009;1219S-1227S.

Your Role

- School lunch will have a maximum calorie level
- Fruits & Vegetables not interchangeable
- Must select a fruit or vegetable to be reimbursable
- Serve $\frac{1}{2}$ c dark green, orange vegetables & legumes
- Half the grain must be whole wheat
- Only fat free & low fat milk
- Zero trans fat for packaged foods