Lifting the Lid on a healthy school lunchbox

Sonya Stanley
Accredited Practicing Dietitian
Today’s Menu

• Introduction
• Background to children’s dietary habits
  – Lunchboxes during school hours
• Review of teaching basic nutrition
  – What’s in healthy lunchbox
• Links between SACSA and healthy lunchboxes
  – DECS Healthy Eating Guidelines
• Integrating food label reading across curriculum areas
  – Price per kilo
  – Healthy lunchbox foods

Summary, close and evaluation
Expected outcomes

By the end of the workshop, you will have:

- A working knowledge of the key strategic documents in healthy eating and healthy eating programs for schools and communities
- Investigated healthy lunch box options for children’s food supply at school.
- An increased awareness of resources to support the implementation of healthy eating in school communities

- “Top Teaching Tips”
Interactive session!
Warm up activity

What’s in food?
2007 Children’s Nutrition and PA Survey

• 4487 children
  – SA Total N = 877
• 24 hour dietary recall


- Fruit juice
- Fruit excluding juice, and low SES
- Fibre
- Vegetables; especially without potato
- Breakfast
- Fat, sugar, sodium
- Calcium
- Calcium
Main findings: Fruit

- Vegetable and fruit intake declined with age
- Low percentage of children meeting dietary recommendation

<table>
<thead>
<tr>
<th>FRUIT</th>
<th>Juice</th>
<th>No Juice</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-8 years</td>
<td>93%</td>
<td>61%</td>
</tr>
<tr>
<td>9-13 years</td>
<td>90%</td>
<td>51%</td>
</tr>
<tr>
<td>14-16 years</td>
<td>24%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Main findings: Vegetables

- Vegetable intake declined with age
- Low percentage of children meeting the dietary recommendation

<table>
<thead>
<tr>
<th>VEG</th>
<th>Potato</th>
<th>No Potato</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-8 years</td>
<td>22%</td>
<td>3%</td>
</tr>
<tr>
<td>9-13 years</td>
<td>14%</td>
<td>2%</td>
</tr>
<tr>
<td>14-16 years</td>
<td>5%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Main findings: key nutrients

- Fat, sugar and sodium intakes exceeded recommendations for children.

<table>
<thead>
<tr>
<th></th>
<th>SATURATED FAT</th>
<th>SUGAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-8 years</td>
<td>13.7%</td>
<td>24.3%</td>
</tr>
<tr>
<td>9-13 years</td>
<td>13.6%</td>
<td>23.7%</td>
</tr>
</tbody>
</table>

How much food for children?

Estimated total energy requirements for children.

<table>
<thead>
<tr>
<th>ENERGY</th>
<th>BOYS</th>
<th>GIRLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4000-5000 kJ</td>
<td>6 - 9 years</td>
<td>6-11 years</td>
</tr>
<tr>
<td>5100-5500</td>
<td>10 - 11 years</td>
<td>12-13 years</td>
</tr>
<tr>
<td>5600-6000 kJ</td>
<td>12-13</td>
<td>14-17 years</td>
</tr>
</tbody>
</table>

NHMRC Nutrient Reference Values – Estimated E Requirements
What’s in a lunchbox?

- **One third** of total energy intake during school hours

<table>
<thead>
<tr>
<th>TOTAL E (kJ)</th>
<th>LUNCHBOX E (kJ)</th>
<th>BOYS</th>
<th>GIRLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4000-5000kJ</td>
<td>~1300 – 1700kJ</td>
<td>6 - 9 yrs</td>
<td>6-11 yrs</td>
</tr>
<tr>
<td>5100-5500kJ</td>
<td>~1700 - 1800kJ</td>
<td>10 -11 yrs</td>
<td>12-13 yrs</td>
</tr>
<tr>
<td>5600-6000 kJ</td>
<td>~1900 – 2000kJ</td>
<td>12- 13 yrs</td>
<td>14-17 yrs</td>
</tr>
</tbody>
</table>

NHMRC Nutrient Reference Values – *Estimated E Requirements*
Encouraging students to get the balance right

**MORE**
- Vegetables
- Fruit
- Dairy
- Wholegrains

**LESS**
- Pre-packaged snacks
- Sweetened drinks

*More* and *Less* messages are consistent with a *positive* approach to food.
What are the barriers to a healthy lunchbox?

Group discussion of factors which inhibit kids from bringing a healthy lunch
Common barriers to a healthy lunchbox

- Group 1: Knowledge
- Group 2: Taste
- Group 3: Time
- Group 4: Cost
- Group 5: Peers

During today’s session, your task is to ‘twitter’ ideas and resources which can help address your nominated barrier.
Eg. Food cards – knowledge of parents and students
Nutrition Basics
SA and Australian Nutrition Education materials

- State
- National

How would you rate your familiarity and use of these guides?
What are your top tips for using the key nutrition education materials?

Small group discussion
Report back to the group
Dietary guidelines for children and adolescents

Enjoy a wide variety of nutritious foods -

- Eat plenty of vegetables, legumes & fruits
- Eat plenty of cereals (including breads, rice, pasta and noodles), preferably wholegrain
- Include lean meat, fish, poultry &/or alternatives
- Include milk, yoghurts, cheeses
- Drink water as main drink
Dietary guidelines for children and adolescents

Care should be taken to -

- Limit saturated fat
- Low fat diets are not suitable for young children under 2 years
- Choose foods low in salt
- Consume only moderate amounts of sugars and foods containing added sugars
Tip for Teaching the Dietary Guidelines

The GOOD HEALTH puzzle: for good health, you need all the pieces of the puzzle put together.

- Eat wide variety of nutritious foods
- Care for food: Prepare & store safely
- Sufficient healthy food & physical activity
- Encourage & support breastfeeding
Tip for teaching the Australian Guide to Healthy Eating

“GLOW” foods

“GO” foods

“GROW” foods
The Five Food Groups

WHAT ARE THEY?

• Breads (cereal) foods, mostly wholegrain and or high cereal fibre choices
• Vegetables and legumes/beans
• Fruit
• Milk, yoghurt, cheese and for alternatives mostly reduced fat
• Lean meats and poultry, fish, eggs, tofu, nuts and seeds legumes/beans
Using the blank AGHE

1. Tick each food group
2. For portions, refer to the Dietary Guidelines for Australians
Healthy Eating Guidelines = “HEGs”
Why have HEGs for SA schools and preschools?

- Eating healthy is essential for supporting students’ wellbeing and learning
- Links to learn wellbeing framework

**HEGs: The role of schools**

Schools are a critical part of the social environment that shapes children’s eating behaviours.

Schools can play a key role in ensuring that healthy behaviour is **learned, practiced & supported** through the school curriculum & environment.
The Healthy Eating Guidelines for SA schools & preschools

1. Curriculum

2. The Learning Environment: 
   promote daily veg and fruit, water

3. Food supply: 
   canteen, celebrations, fundraising


5. Food-related health support planning: 
   special dietary requirements

6. Working with families, health services and industry: 
   communication with parents
Section 1: Curriculum

1.1 Learning about food and nutrition is part of SACSA framework.

1.2 Learning should provide opportunities to develop practical food skills.

1.3 Healthy eating learning should be inclusive of socioeconomic, cultural and spiritual perspectives of their communities.
Practical food skills healthy eating across the curriculum

Practical food skills within curriculum:

• Growing, harvesting
• Selection
• Preparation including cooking
• Serving
Healthy eating: inclusive of socio economic, cultural and spiritual perspectives

• Social perspectives including cost

• Links with language and cultural learning

• Cultural themes and events

• Culturally appropriate information for children and families
Learning about healthy eating across the curriculum

MATHS: Exploring, analysing & modelling data

SCIENCE: Life systems

ENGLISH: Texts & contexts

SOCIETY & ENV: Social systems

DESIGN & TECHNOLOGY: Critiquing & Designing

ARTS: Arts practice

HEALTH & PE: Health of individuals & communities

Exchange of ideas and group sharing
What’s in a healthy lunchbox?

Tips for teaching
How much food for children?

- Serve sizes and portion guide
- Daily intake based on key nutrients
- Components of a healthy lunchbox

<table>
<thead>
<tr>
<th>Age of Child</th>
<th>Fruit (serves)</th>
<th>Vegetables (serves)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-7</td>
<td>1-2</td>
<td>2-4</td>
</tr>
<tr>
<td>8-11</td>
<td>1-2</td>
<td>3-5</td>
</tr>
<tr>
<td>12-18</td>
<td>3-4</td>
<td>4-9</td>
</tr>
</tbody>
</table>
Hand sized serves

- **Palm** = 100g of meat
- **Thumb** = 30g cheese
- **Thumb tip** = 1 teaspoon

**Handful** = 30 – 60g

[www.colormehealthy.com/0_docs/ServingSizeInHand.pdf](http://www.colormehealthy.com/0_docs/ServingSizeInHand.pdf)
Analysing a healthy lunchbox

What foods help fuel healthy and active students during school?
Lunchbox foods to help kids **GO, GROW & GLOW**

**Recess**
Fruit/veg and LF dairy
- Fruit
- Crackers and cheese
- Vegie sticks and dip
- Yoghurt
- Celery boats

**Lunch**
Protein + grains + salad
- Sandwich
- Wrap
- Bread roll
- Pasta salad

[Image: Australian Guide to Healthy Eating]
Learning about LUNCHBOXES across the curriculum:

Small group activity: ‘Curriculum bingo’

How many curriculum areas can be met teaching healthy lunchboxes?

Three minutes to come up with ideas across the curriculum
Teaching students about healthy lunchboxes and SACSA links

MATHS:
Measurement (lunchbox items)
Number (calculations against AGHE)

SOCIETY & ENVIRON:
Place, space, environment
(identify recyclables / litter)

DESIGN & TECHNOLOGY:
Critiquing (design a lunchbox card)
Teaching students about healthy lunchboxes and SACSA links

**ARTS:**
Analysis (Create a healthy lunchbox display)

**ENGLISH:**
Texts and contexts (Compose a story/poem about ‘GO, GLOW & GROW’ lunchbox foods)

**Health and PE:**
Individuals and Communities (Discuss AGHE foods which can be sent in a lunchbox)
Whole of class / school-wide promotion of healthy lunchboxes

• Lunchbox audit
  – Focus on classes, not individual students

• Litter free lunch days
  – Links with environment activities

• Lunchbox passports
  – Eating a rainbow of veg and fruit

• Healthy lunchbox cards
  – Based on the AGHE

• Label reading
Food Label Detectives

- Reading and analysing food labels
- Reviewing food marketing and promotion
Teaching students to read food labels

Some things to discuss:

• **Serve Size**
  – The manufacturer picks this. It may not be the size students consume the food.

• **Ingredient List**
  – Ingredients are listed in descending order of quantity i.e: largest first, smallest last
  – More recent labelling includes the **percentage** of key ingredients of total product
  – Eg: % of strawberries in a strawberry yoghurt
Teaching students to read food labels

- **Nutrition Information Panel**
  - Per 100g most useful
  - Use to compare similar products

- **To work out the fat content of a product:**
  - Look in the ‘per 100g’ column
  - Go to the row labelled ‘fat’
  - The fat content is 22.3g per 100g or 22.3% fat
  - The saturated fat content is 10.3g or 10.3% saturated fat
Teaching students to read food labels

What To Look For:

• Fat
  – Choose the product with less fat (especially less saturated fat)
  ✓ Look for <10g/100g
  ✓ Look for <2g/100g in dairy products
Teaching students to read food labels

What To Look For:

• Sugar
  – Total **Sugar** includes added sugar, but also natural sugars found in fruit and milk
    • Consider the ingredient list to determine the main source of sugar
  ✓ In general, choose products with total sugar less than 10-15g/100g
  ✓ Or less than 25g/100g if the product contains fruit
Teaching students to read food labels

- **Sodium**
  - The *less* the better
  ✓ Less than 400mg/100g is a good choice

- **Fibre**
  - The *more* the better
  ✓ More than 5g/100g is a good choice
Group Activity:
Use the label reading card to analyse the snack food package

Nutritional Guidelines
Fat – Less than 10g per 100g
Sugar – Less than 15g per 100g*
Sodium – Less than 400mg
Fibre – More than 5g per 100g

Is your food an ‘everyday’ food or a ‘sometimes’ food?
Teaching students about label reading using SACSA links

**MATHS:**

Measurement (of fat/ sugar/ salt/ fibre);

Number (calculate price per kilo)

**SOCIETY and ENVIRONMENT:**

Social systems (paddock to plate)

**DESIGN & TECHNOLOGY:**

Designing (Kid-friendly health foods)
Further Learning with Labels

Food packages contain all sorts of claims.

But are these always helpful?
# Further Learning with Labels

<table>
<thead>
<tr>
<th>Claim</th>
<th>What Does it Mean?</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Added Sugar</td>
<td>No sugar added&lt;br&gt;May still contain a high level of natural sugar and be high in energy</td>
</tr>
<tr>
<td>Lite or Light</td>
<td>Could refer to colour, taste, texture or fat. Check</td>
</tr>
<tr>
<td>Low Fat / Fat Free</td>
<td>Food is low in fat. However – check sugar content</td>
</tr>
<tr>
<td>Poly/Monounsaturated</td>
<td>Refers to the type of fat. A healthier choice than saturated fats, but still high in energy. Use sparingly</td>
</tr>
<tr>
<td>Salt Reduced</td>
<td>Less than 75% salt of regular products. But may still be high in salt</td>
</tr>
</tbody>
</table>
Further Learning with Labels

- Calculate cost per kilogram
- Compare everyday vs sometimes products and discuss value for money in buying healthy food

Cost Per Kilo

1. Round off the price to the nearest 50 cents
   $2.53 becomes $2.50

2. Round off the weight to the nearest 50 grams
   180 grams becomes 200gms

3. Add up $2.50 column until it hits the 200 gram row –
   The cost is $12.50 per kilogram.

Compare the cost of recess foods

- Vegie sticks: $2.60/kg
- BBQ shapes: $11.20/kg
- Apples: $2.99/kg
- Rollups: $33.04/kg
- Popcorn: $5.40/kg
- Small pkt Chips: $22.56/kg
- Muesli bars: $15.40/kg
- Muffin (homemade): $3.80/kg

Source: ‘The Great Lunchbox Dilemma’. Community Nutrition Unit, DHHS, Tasmania
Further Learning with Labels

• 1 teaspoon = 5 grams

• Calculate how many teaspoons of fat and sugar are in food products
  • Dividing the amount in the 100g column by 5

• Measure this amount out in teaspoons of sugar & ‘fat’
  • Use clear plastic cups & thick yellow custard
Further Learning with Labels
‘Fat in Food’ resources

Source: ‘Fat in Food’ folder. Tropical Public Health Unit, Townsville.
Further Learning with Labels
Supermarket Tours

Local Dietitian OR..... Virtual ‘Classroom Tour’
- Ask students to or save from lunchbox foods or bring food packaging in from home
- To cover all AGHE food groups, use food models, cut outs or drawn pictures or models of foods without packaging (eg. fresh fruit and veg)

Price per kilo
- Use Internet shopping websites
- Ask students to collect prices from supermarkets
- Grocery catalogues**
Other Activities

- Ask students to design the layout of the supermarket
- Conduct a debate about value for money when buying food
- Write a letter to a food company to recommend the changes required to promote fresh foods as better than processed high fat/sugar/salt foods
- Assembly presentation to share the class findings about label reading / price per kilo
- Newsletter article targeting parents about findings
Other useful healthy eating resources

- Curriculum programs
  - ‘Pick up and run’
  - Healthy homework
- Electronic resources
- Pictorial
  - ‘Fat in Food’
- Practical
  - Cooking
  - Gardening
The Great Lunch box dilemma

Hints to make lunch boxes more interesting:

Pack a nibble mix into a decorated snaplock plastic bag.

Make healthy sandwiches, remove crusts from bread and flute with a rolling pin. Spread and roll like a Swiss roll, wrap in cling film overnight and slice into rounds.

Include a non food "surprise" e.g., a joke, flower, small card etc.

Compare price per kilo:

- Veggie sticks: $2.60/kg
- BBQ shapes: $11.20/kg
- Cheese: $6.47/kg
- Crackers: $4.67/kg
- Leberkase: $7.95/kg
- Muesli bar: $3.60/kg
- Puff pastry: $4.67/kg
- Bread roll: $0.60/kg
- Orange: $0.90/kg
- Apple: $2.99/kg
- Rollups: $3.34/kg
- Popcorn: $5.40/kg
- Snak kiwi: $2.99/kg
- Greek yoghurt: $1.69/kg

- Healthy lunch:
  - Milk
  - Nutritious fruits
  - Complex carbohydrates
  - Steaming green vegetables
  - Cereals
  - Nuts & seeds
  - Fruits
  - Vegetables
  - Complex carbohydrates
  - Steaming green vegetables
  - Cereals
  - Nuts & seeds
  - Fruits
  - Vegetables
Why do we need food?

- Ask the children why do we need food, what does it do for us.
- Prompt them by asking is all food good for us?
- Can the pupils tell you anything about the food we need to eat?
- You could then identify good foods and bad foods

http://www.ngfl-cymru.org.uk/vtc/ngfl/pse/16/ks2/default.html
Which lunch would you choose?

Option 1

Option 2

Click on the options to see what happens

http://www.ngfl-cymru.org.uk/vtc/ngfl/pse/16/ks2/default.html
What do you think of my lunch box?
What do you think of my lunch box?

• Encourage the children to talk about the contents of the lunch box.

• Are there any items that they would consider suitable and why?

• Are there any items they would consider not suitable?

• Discuss how we can find out what is in the packet foods we eat - nutritional information on the side.

• Discuss the kinds of fruit and vegetables suitable for a lunch box.

http://www.ngfl-cymru.org.uk/vtc/ngfl/pse/16/ks2/default.html
What should we put into our Healthy Lunchbox?

- Sandwiches and salads
- Snacks
- Fruit and vegetables
- Drinks

Click on the hyperlinks to find some examples

http://www.ngfl-cymru.org.uk/vtc/ngfl/pse/16/ks2/default.html
What should we put into our healthy lunch box?

• Discuss with the children what kinds of food would be suitable for the lunch box.

• Click on the four categories to show the children examples that they can put into the box.

• The children can then write their choices in the box.
Can you fill the lunch box with healthy food?

Decide which foods you would like and drag them into the box. Remember - balance is the key!

http://www.ngfl-cymru.org.uk/vtc/ngfl/pse/16/ks2/default.html
Can you fill the lunch box with healthy food?

• Ask the children to click and drag the items of food into the lunch box.
• What can they tell you about the items of food?

http://www.ngfl-cymru.org.uk/vtc/ngfl/pse/16/ks2/default.html
More useful resources for Healthy Lunchboxes

**Key curriculum program resources**
- Australian Guide to Healthy Eating
- Indigenous AGHE
- Dietary Guidelines for children and adolescents

**Other resources**
- Label reading
- FDODcents resources
- Kids in the Kitchen
- Healthy catering /fundraising guides
- Newsletter inserts for parents
Top Teaching Tips

What will you share from today’s session with your staff, students and parents school?
Summary of today’s topics

• Foods to target
• Dietary Guidelines
• AHGE
• Five food groups
• Portions
• Positive messages
• HEGs

• Curriculum
• Practical food skills
• Food and culture
• Lunchbox activities for class / school
• Label reading
• Price per kilo
Review of barriers to healthy lunchboxes: your group’s top resource/s

- Group 1: Knowledge
- Group 2: Taste
- Group 3: Time
- Group 4: Cost
- Group 5: Peers

- AHGE - students, parents
- GO, GLOW, GROW
- Label reading
- Price per kilo
- Litter free lunches
10 Golden Guidelines for Nutrition Education

1. The younger the better.
2. Reinforce, not force.
3. Keep it simple and enjoyable.
4. Practice makes perfect.
5. What do they think?
6. You are what you eat.
7. Practice what you preach.
8. Involve everyone.
9. Make it relevant.
10. Physiology can be fun.

Remember: Keep messages simple & consistent

To stay young, the doctor said to exercise and eat the right foods.

What?!

I thought he said ACCESSORIZE and BUY NICE SHOES!
A 5 year community demonstration project funded by the SA Health for the Morphett Vale community until July 2010

Mel Tripptree, Project Coordinator

Implemented by Southern Primary Health, of Southern Adelaide Health Service and Murray Mallee Community Health Service, of Hills Mallee Southern Regional Health Service
References


4. [ww.colormehealthy.com/0_docs/ServingSizeInHand.pdf](http://www.colormehealthy.com/0_docs/ServingSizeInHand.pdf)

5. ‘Healthy Lunchbox’ electronic program. Torfearn County Borough.

6. ‘The Great Lunchbox Dilemma’ Community Nutrition Unit, DHHS, Tasmania.