

TEACHING NUTRITION IN SASKATCHEWAN



Health and Physical Education Grade 6

Developed by: Saskatchewan Health Authority Public Health Nutritionists

The purpose of *Teaching Nutrition in Saskatchewan: Concepts and Resources* is to provide credible Canadian based nutrition information and resources based on the Saskatchewan Health Education Curriculum (2010).

The **Nutrition Concepts and Resources** section identifies nutrition concepts and resources relating to grade-specific provincial Health Education curriculum outcomes. These lists only refer to the curriculum outcomes that have an obvious logical association to nutrition. They are only suggestions and not exclusive.

The **Nutrition Background Information** section provides educators with current and reliable Canadian healthy eating information.

For more information, email the Population Health Department at:
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Teaching Nutrition to Children

Teaching about food and nutrition is important for the health and wellbeing of students. Below are some tips for teaching nutrition to children:

- Use current and credible nutrition information. *Teaching Nutrition in Saskatchewan* and dietitians are great sources of reliable nutrition information. When searching for health information on the internet, refer to [How to find food and nutrition information you can trust](#) from Unlockfood.ca for a few tips to make sure you get the best information.
- Include cross-curricular connections in the classroom. For example, when teaching fractions in math, illustrate the lesson using fruit instead of pie. Choose books and projects that show healthy food and eating habits. For examples of how to link nutrition to other Saskatchewan curricula, refer to The [Saskatchewan Curricular Outcomes and Nutrition](#), a resource from [Nourishing Minds Eat Well Learn well Live Well](#).
- Spread healthy eating lessons out throughout the year rather than in a short unit. Connect key messages to special events or classroom celebrations by offering or asking students to bring healthy options.
- Use experiential learning strategies to engage students. Let students work with food in the classroom, visit a grocery store, start a cooking club or a school garden. If you are considering offering taste tests, check out [Food Experiences](#) from the Public Health Nutritionists of SK.
- Avoid labelling foods as ‘good’ vs ‘bad’ or healthy vs unhealthy. Allowing kids to explore and learn about food while keeping it positive and language neutral will lead to better eating habits than avoidance-based education strategies like ‘don’t eat sugar’ or ‘saturated fat is bad.’
- Promote a positive relationship with food and physical activity without encouraging dieting or weight loss attitudes and behaviours. Ensure that all students, regardless of weight, shape or size, are equally valued and respected. Enforce that it is not acceptable to label fatness as bad or make comments about people’s size or shape. For more information refer to [Weight Bias](#) on page 22
- Be a good role model for students. Avoid talking negatively about foods or discuss dieting, weight loss or dissatisfaction of body shape or size.
- Do not make comments about student lunches or snacks and do not take food items away if they are not considered “healthy.” Eating looks different to everyone and what and how much people eat will depend on many factors. Children may have little control over what is in their lunch. Drawing attention to “unhealthy” choices can isolate children from their peers and cause them to feel shame. Remember, no one food or meal defines our eating habits. If you have concerns about a student’s lunch talk to the parents separately in a non-judgemental manner.
- Allow all students to make their own decisions about *what* and *how much* to eat and drink from their lunches. There is no benefit to having children eat certain foods before others such as eating a sandwich before a cookie. Children eat better when they can pick from the available options in the order they want.

References

1. Algoma Public Health. Healthy Living Resources for the Classroom 2017/2018: Healthy Eating Elementary (grades K-8). [cited 2019 July 22]. Available from: www.algomapublichealth.com/media/2502/healthy-eating-elementary-2017-2018-hyperlinked-sept-2017-2.pdf
2. Ontario Dietitians in Public Health. Bright Bites: Tips for Teaching Nutrition. [cited 2019 July 22]. Available from: brightbites.ca/tips-for-teaching-nutrition/
3. Ellyn Satter, Nutrition Education in the Schools, 2008. Retrieved from: www.ellynsatterinstitute.org/wpcontent/uploads/2016/03/Secrets-Appendix-H-School-Nutr-Ed.pdf
4. Healthy Schools BC. Teach Food First. 2023. Guiding Principles for Educators: Teaching About Food and Nutrition

Grade 6 Health Education

Grade 6 Health Education: Affirming Personal Standards		
Health Education Goal 1: Develop the understanding, skills and confidences necessary to take action to improve health.		
Curriculum Outcome	Nutrition Concept	Resources: Background Information, Sample Activities, etc.
<p>Outcome USC 6.1: Analyze the factors that influence the development of personal standards and identity, and determine the impact on healthy decision making (including cultural norms, societal norms, family values, peer pressures, mass media, traditional knowledge, white privilege, legacy of colonization, and heterosexual privilege).</p>	<p>Family meals, Family, home and cultural foods</p>	<p>Nutrition Background Information: <i>Family Meals</i> (p. 14)</p> <p>Classroom Sample Activities</p> <ul style="list-style-type: none"> • <i>Featured Activities – Fun Section.</i> The Family Dinner Project. thefamilydinnerproject.org • <i>Foods of the World.</i> Alberta Health Services. albertahealthservices.ca • <i>Interview an Elder.</i> Edible Schoolyard Project. edibleschoolyard.org/resource/interview-elder • <i>Traditional First Nations Foods Lesson Plans.</i> Teach Food First. healthyschoolsbc.ca • <i>Food Memories.</i> Edible Schoolyard Project. edibleschoolyard.org • <i>Farming and Family.</i> Edible Schoolyard Project. edibleschoolyard.org • <i>Heritage Box.</i> Edible School Yard Project. edibleschoolyard.org • <i>Interview a Community Food Member.</i> Edible School Yard Project. edibleschoolyard.org
	<p>Food and the Environment</p>	<ul style="list-style-type: none"> • <i>Food Systems.</i> OPHEA-Growing Chefs. ophea.net • <i>Green New Meal.</i> FoodShare. foodshare.net • <i>Food Miles.</i> Resources for Rethinking. resources4rethinking.ca • <i>Sustainable Happiness and Health Education.</i> Resources for Rethinking. resources4rethinking.ca • <i>Food Day Curriculum.</i> Resources for Rethinking. resources4rethinking.ca • <i>Decline of the Honey Bee.</i> Hands on Food. handsonfood.ca • <i>Edible Weeds.</i> Hands on Food. handsonfood.ca • <i>Form Farm to Fork.</i> Little Green Thumbs. littlegreenthumbs.org

	<p>Marketing to children and youth</p>	<p>Nutrition Background Information: <i>Marketing to Children and Youth</i> (p. 16)</p> <ul style="list-style-type: none"> • <i>What’s on the Outside Might not be on the Inside.</i> Raising Our Healthy Kids. vimeo.com • <i>Kids Foods versus Adult Foods.</i> Raising Our Healthy Kids. vimeo.com • <i>Colour and Packaged Foods.</i> Raising Our Healthy Kids. vimeo.com • <i>Talking to Kids about Advertising.</i> Media Smarts. mediasmarts.ca <p>Classroom Sample Activities</p> <ul style="list-style-type: none"> • <i>Online Marketing to Kids: Strategies and Techniques.</i> Media Smarts. mediasmarts.ca • <i>Looks Good Enough to Eat.</i> Media Smarts. mediasmarts.ca • <i>Convince me.</i> A tour of the grocery store. OPHEA. ophea.net • <i>Analyzing Media on Organic.</i> Edible School Yard Project. edibleschoolyard.org
	<p>Determinants of health</p>	<p>Nutrition Background Information: <i>Determinants of Health</i> (p. 18)</p> <ul style="list-style-type: none"> • <i>Della: Hurdles to Health.</i> Promoting Health Equity Project. youtube.com • <i>Let’s Start a Conversation.</i> Saskatoon Health Region. youtube.com <p>Classroom Sample Activities</p> <ul style="list-style-type: none"> • <i>Lesson Plans on Food Marketing & Food Choices.</i> Media Smarts. mediasmarts.ca • <i>Right to Food Workshop Series (Kids).</i> FoodShare. foodshare.net • <i>Community Food Mapping.</i> OPHEA. ophea.net • <i>Shop till you Drop.</i> Facing the Future. Resources for Rethinking. resources4rethinking.ca • <i>Healthy Neighborhoods, Healthy Kids Guide.</i> Shelburne Farms’ Sustainable Schools Project. Resources for Rethinking. resources4rethinking.ca

Grade 6 Health Education: Affirming Personal Standards

Health Education Goal 1: Develop the understanding, skills and confidences necessary to take action to improve health.

Curriculum Outcome	Nutrition Concept	Resources: Background Information, Sample Activities, etc.
<p>Outcome 6.4 Assess and demonstrate strategies used to identify and make healthy decisions in stressful situations.</p>	<p>What is healthy eating</p>	<p>Nutrition Background Information: <i>Healthy Eating for Children and Youth</i> (p.20)</p> <ul style="list-style-type: none"> Government of Canada. food-guide.canada.ca <i>Canada's Food Guide</i>. <i>Mindless Eating: Why We Eat More Than We Think</i>. Brian Wansink. brianwansink.com <p>Classroom Sample Activities</p> <ul style="list-style-type: none"> <i>A Guided Discovery of Canada's Food Guide: Mindful Eating 4-6</i>. Teach Nutrition DFC. dairyfarmersofcanada.ca <i>Food Environments and Food Security: Grocery Shopping</i>. FanLit. fanlit.org

Grade 6 Health Education: Affirming Personal Standards

Health Education Goal 1: Develop the understanding, skills and confidences necessary to take action to improve health.

Curriculum Outcome	Nutrition Concept	Resources: Background Information, Sample Activities, etc.
<p>Outcome USC6.5: Analyze the influences (e.g., cultural, social) on perceptions of and personal standards</p>	<p>Weight bias</p>	<p>Nutrition Background Information: <i>Weight Bias</i> (p. 22)</p> <ul style="list-style-type: none"> <i>Weight Bias at Home and School</i>. Rudd Centre. Video: youtube.com & Discussion guide: ruddcenter.uconn.edu

<p>related to body image, and the resulting impact on the identities and the well-being of self, family, and community. Identify sources of, and evaluate information about, influences on body image.</p>	<p>Body image, fad diets, media and health behaviours</p> <p>(Nutrition and body image, although related, should be taught at different times. Teaching these topics together may lead to disordered eating behaviours in children)</p>	<p>Nutrition Background Information: Nutrition Trends & Fad Diets (p. 38)</p> <ul style="list-style-type: none"> • <i>Body Image</i>. Teen Talk (parent/teacher information). teentalk.ca • <i>Body Image</i>. National Eating Disorders Collaboration nedc.com.au <p>Classroom Sample Activities</p> <ul style="list-style-type: none"> • <i>Body Image Lesson Plans Grade 6</i>. Media Smarts. mediasmarts.ca • <i>Dove Evolution</i>. Dove. youtube.com • <i>Grade 6 - Beyond Images (A Self-esteem and body-image curriculum)</i>. National Eating Disorders Information Centre. beyondimages.ca • <i>Teach Body Image Lessons</i>. teachbodyimage.com • <i>Confronting Comparisons to Build Body Confidence (Classroom Activities)</i>. Amazing me. amazingmeselfesteem.com • <i>Digital Citizenship Curriculum</i>. Common Sense Education. commonsense.org • <i>Everybody for Every Body</i>. FoodShare. foodshare.net • <i>Food Detectives</i>. Alberta Health Services. albertahealthservices.ca
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Grade 6 Health Education: Affirming Personal Standards		
Health Education Goal 1: Develop the understanding, skills and confidences necessary to take action to improve health.		
Curriculum Outcome	Nutrition Concept	Resources: Background Information, Sample Activities, etc.
<p>Outcome USC 6.7: Assess how health promotions and advertising influence personal standards and behaviours and</p>	<p>Marketing to children and youth</p>	<p>Nutrition Background Information: Marketing to Children and Youth (p. 16)</p> <ul style="list-style-type: none"> • <i>What's on the Outside Might not be on the Inside</i>. Raising Our Healthy Kids. vimeo.com • <i>Kids Foods versus Adult Foods</i>. Raising Our Healthy Kids. vimeo.com • <i>Colour and Packaged Foods</i>. Raising Our Healthy Kids. vimeo.com <p>Classroom Samples Activities</p> <ul style="list-style-type: none"> • <i>You've Gotta Have a Gimmick</i>. Media Smarts. mediasmarts.ca • <i>Advertising All Around Us</i>. Media Smarts. mediasmarts.ca • <i>Activity 3: Viewing with a Critical Eye</i>. OPHEA. ophea.net

<p>determine how and why certain groups of consumers are targeted.</p>	<p>Health promotion strategies</p>	<p>Nutrition Background Information: <i>Health Promotion Strategies: Making the Healthy Choice the Easy Choice</i> (p.24); <i>Creating a Weight Inclusive School Environment</i>. Interior Health. interiorhealth.ca</p> <p>Classroom Sample Activities</p> <ul style="list-style-type: none"> • <i>The Power of Product Placement</i>. Sarah Marie. sarahmarie2216.wordpress.com • <i>Targeting Teens</i>. San Francisco Environment. sfenvironmentkids.org • <i>CSCH School Nutrition Environment Assessment Tool from 'Nourishing Minds: Eat Well – Learn Well – Live Well.'</i> Government of Saskatchewan. publications.saskatchewan.ca • <i>Show me the Money</i>. Bright Bites. brightbites.ca
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Grade 6 Health Education: Affirming Personal Standards		
Health Education Goal 2: Make informed decisions based on health-related knowledge.		
Curriculum Outcome	Nutrition Concept	Resources: Background Information, Sample Activities, etc.
<p>Outcome DM 6.8: Assess the role of personal standards in decision making related to body image and health promotions.</p>	<p>Creating SMART goals</p>	<p>Nutrition Background Information: <i>Take Action on Healthy Eating</i> (p.29)</p>
<p>Outcome DM 6.8: Assess the role of</p>	<p>Health promotion strategies</p>	<p>Nutrition Background Information refer to Outcome USC 6.7 (p.5);</p> <p>Classroom Sample Activities: refer to Outcome USC 6.7 (p. 5)</p>

<p>personal standards in decision making related to body image and health promotions.</p> <p>AND</p> <p>Outcome DM 6.9: Examine health opportunities and challenges to establish personal goal statements related to body image and health promotions.</p>	<p>Opportunities and barriers to healthy eating</p>	<p>Nutrition Background Information: <i>Factors Influencing Eating Behaviours in Youth (p.31), Determinants of Health (p.18)</i></p> <p>Classroom Sample Activities</p> <ul style="list-style-type: none"> • <i>Exploring the Influences on Vegetable and Fruit Intake.</i> Bright Bites. brightbites.ca • <i>Right to Food Workshop Series (Kids).</i> FoodShare. foodshare.net
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Grade 6 Health Education: Affirming Personal Standards		
Health Education Goal 3: Apply decisions that will improve personal health and/or the health of others.		
Curriculum Outcome	Nutrition Concept	Resources: Background Information, Sample Activities, etc.*
<p>Outcome AP 6.10: Design and implement (with guidance) two six-day action plans that reflect affirmation of personal standards related to body</p>	<p>Taking action on healthy eating for youth</p>	<p>Nutrition Background Information <i>Taking Action on Healthy Eating (p.29)</i></p>

image and health promotion.		
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Grade 6 Physical Education

Physical Education Goal: Active living		
Outcome	Nutrition Concept	Resources: Background Information, Sample Activities, etc.
Outcome 6.2 Body Composition: Demonstrate an understanding of the impact of inactivity on body composition and how to make healthy choices for a balanced self, including regular participation in movement activity, that effectively and safely affect (maintain, increase, decrease) body fat composition.	Weight bias	Background Information: <i>Weight Bias</i> (p.22) <ul style="list-style-type: none"> <i>Weight Bias at Home and School</i>. Rudd Centre. Video: youtube.com & Discussion guide: ruddcenter.uconn.edu Nutrition Sample Activities <ul style="list-style-type: none"> <i>Beyond Images Grade 6</i>. NEDIC. beyondimages.ca
	Growth monitoring in children and youth	Background Information: <i>Body Composition and Health Risks in Children and Youth</i> (p.34)
	Built environment, eating and physical activity habits	Background Information: <i>Built Environments Impact our Eating Habits and Physical Activity</i> (p.35) Nutrition Sample Activities <ul style="list-style-type: none"> <i>School Travel Planning 101</i>. Saskatchewan in Motion. saskatchewaninmotion.ca <i>Neighbourhood Walkability checklist</i>. Saskatchewan in Motion. saskatchewaninmotion.ca <i>Community Food Mapping</i>. Ophea. ophea.net
	Calories and activity	Background Information: <i>Keeping Brains and Bodies Moving – Calories and How We Use Them</i> (p. 37) Nutrition Sample Activities <ul style="list-style-type: none"> <i>Ready, Set, Go – Healthy Eating for Athletes</i>. Nutrition Resource Kit – Grade Six Lesson Plan. Alberta Health Services. foodimpact.ca

Background Information

Canada's Food Guide – 2019

Canada's Food Guide has provided provides key messages in choosing healthy foods and eating habits.

Canada's Food Guide Healthy Eating Recommendations

Healthy Food Choices

Make it a habit to eat a variety of healthy foods each day.

- ***Eat plenty of vegetables and fruits, whole grain foods and protein foods.*** Choose protein foods that come from plants more often. Protein foods include legumes, nuts, seeds, tofu, fortified soy beverage, fish, shellfish, eggs, poultry, lean meat, lower fat milk, lower fat yogurt and cheeses lower in fat and sodium. Choose foods with healthy fats instead of saturated fat.
- ***Limit highly processed foods. If you choose these foods, eat them less often and in small amounts.*** Prepare meals and snacks using ingredients that have little to no added sodium, sugars or saturated fat. Choose healthier menu options when eating out
- ***Make water your drink of choice.*** Replace sugary drinks with water. Replacing sugary drinks with water will help reduce the amount of sugars you drink.
- ***Use food labels.*** Food labels provide information you can use to make informed choices about foods and drinks at the grocery store and at home.
- ***Be aware that food marketing can influence your choices.*** Food marketing is advertising that promotes the sale of certain food or food products. Many foods and drinks that are marketed can contribute too much sodium, sugars or saturated fat to our eating patterns.

Healthy Eating Habits

Healthy eating is more than the foods you eat. It is also about where, when, why and how you eat.

- ***Be mindful of your eating habits,*** taking time to eat and noticing when you are hungry and when you are full.
- ***Cook more often.*** Cooking more often can help you develop healthy eating habits. You can cook more often by planning what you eat and involving others in planning and preparing meals.
- ***Enjoy your food.*** Enjoying your food is part of healthy eating. Enjoy the taste of your food and the many food-related activities that go along with eating. This includes enjoying culture and food traditions.
- ***Eat meals with others.*** Enjoying healthy foods with family, friends, or neighbours is a great way to enjoy quality time together, share food traditions, across generations and cultures, and explore new healthy foods that you might not normally try.

Several tips, resources and recipes to implement Canada’s Food Guide recommendations into daily habits are available at food-guide.canada.ca/en

References:

1. Government of Canada. Canada’s Dietary Guidelines for Health Professionals and Policy Makers. 2019 Jan [cited 2019 Jul 25]. Available from: food-guide.canada.ca/en/guidelines

Family Meals

Eating meals with others has the potential to impact the health and well-being of children and adolescents (1, 2) providing both nutritional and non-nutritional benefits.

Family Meals Improve Diet Quality

Families who eat together, eat better. Studies show that eating as a family improves the type and variety of food children and adolescents eat, resulting in better food and nutrient intakes (3). When families eat together they tend to consume more vegetables, fruit and milk products and less fried foods and soft drinks (3, 4). As a result, children and adolescents tend to have higher intakes of fibre, calcium, iron, folate, and vitamins B6, B12, C and E in their diets (1).

Research has also demonstrated that children and adolescents who eat together with their families are less likely to be overweight, obese, or to develop disordered eating patterns (1, 3).

Family mealtimes provide opportunities to introduce children to new foods. Serving new foods with familiar ones will help children feel more comfortable trying them; this can lead to children accepting a wider variety of foods.

Family Tradition

Mealtimes provide opportunities for parents to teach food preparation skills, enjoy traditional foods, and model healthy eating habits. Mealtimes also help to instill a sense of belonging in children and provide a way to share family values and traditions (4). Family mealtimes help families to bond by sharing stories, discussing the day's events, and making plans together. Memories and traditions formed during mealtimes stay with children for the rest of their lives.

Better Grades and Skill Development

Children who eat together with their families on a regular basis are more engaged and learn better in school, and also have positive views of their personal futures (3). Students who eat with their families are more likely to have healthy eating patterns including adequate amounts of fruits, vegetables, protein, and fibre. Studies show that students who eat healthily do better on literacy tests than those who eat processed foods containing high amounts of salt and saturated fat (6).

Communication and Risky Behaviours

Family mealtimes encourage conversation and interaction which improve a child's vocabulary and communication skills. Children who communicate better have fewer behavioural and social problems (1, 3). Children and youth who eat with their families at least once a day are less likely to smoke, drink, use drugs, get into serious fights, engage in sexual activity at an early age, or attempt suicide (1, 3, 7).

Call to Action

Role modeling healthy behaviour, at home and at school, can have a positive influence on developing children's habits.

- Encourage students to learn about and make their own healthy food choices.
- Encourage students to talk to their parents about having family meals.

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1. Alberta Milk. Eat Together-Rediscovering the Family Meal. 2009 [cited 2015 Nov 1]. Available from: www.moreaboutmilk.com/media/nutrition_file_newsletters/may2009nffhefinal.pdf
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3. Dietitians of Canada. Nutrition Month Campaign Reference Manual for Dietitians: Celebrate Food... from Field to Table! Ottawa: Dietitians of Canada; 2011.
4. Brotherson S. The Big Benefits of Family Meals. *Eat Smart Play Hard Together Magazine*; 2009 [cited 2017 Jan 12]. Available from: www.ag.ndsu.edu/eatsmart/eat-smart-play-hard.-magazines-1/2009-eat-smart-play-hard-magazine/test-item
5. Eat Right Ontario. Family Meals with No TVs. [cited 2015 Oct 22]. Available from: www.unlockfood.ca/en/Articles/Adolescents-teenagers/Family-Meals-with-no-TV.aspx
6. Florence, MD., Asbridge, M. and Veugelers, P. J. Diet Quality and Academic Performance. *Journal of School Health*. 2008 Mar 12;78: 209–215. doi: 10.1111/j.1746-1561.2008.00288.x. Abstract available from: www.ncbi.nlm.nih.gov/pubmed/18336680
7. The Center on Addiction and Substance Abuse at Columbia University. The Importance of Family Dinners VIII. September 2012 [cited 2015 Oct 22]. Available from: www.casacolumbia.org/addiction-research/reports/importance-of-family-dinners-2012

Marketing to Children and Youth

Children and youth are a vulnerable target audience for food marketing companies since children can influence parental spending decisions, have their own spending power and are future adult consumers. It is important for young people to learn how they are targeted by these companies to help them become more aware of and resistant to the influence of marketing.

Food advertising and other forms of marketing have been shown to influence young people's taste preferences, purchasing behaviour, and eating habits (1). The majority of food marketing promotes products that are high in sugar, fat, and sodium (1, 2). Food marketing has been linked to an increase in children being overweight which can increase the risk for diabetes and other chronic diseases (1).

It is also important to note that elementary school age children do not have the ability to make rational and healthy decisions about the type of food to select. Adults need to provide them with healthy choices to support them in food selection. Often foods found in vending machines or canteens, or those used in classroom celebrations or as rewards are "easy to like foods" such as candy, chocolate, sweets and chips. These foods interfere with children's interest in trying other foods and can spoil their appetites for the next meal. Limit access to these foods to support children's ability to eat well.

Types of Food Marketing

Mobile Devices (3)

Over the last few years, mobile devices such as cell phones and tablets have become popular for children of all ages. As children get older, their use of these devices increases. Many food marketing companies are reaching youth through text messages, emails, social media and mobile apps. For example, many sugary drink companies and fast food restaurants have developed creative and engaging mobile apps geared to youth. The apps include games as well as ways to access promotions and to pay for purchases using cell phones. Due to their presence on social media and creation of mobile apps, food companies are able to interact with young people wherever they are.

Food Marketing through Social Media (4)

Over the last few years, food companies have dramatically increased marketing to children and youth through usage of social media platforms such as social network pages (e.g. Facebook, Twitter) and video sharing websites (e.g. YouTube). This is not surprising since social networking sites are very popular with young people. Because youth are susceptible to peer influences and are willing to interact with food companies through social media, food marketers engage them through short term trending promotions. Youth are encouraged to repeatedly return to the site and share the marketing messages with their friends. Food companies' social network pages contain polls, contests, photos and videos to enhance youth engagement with their brands. Youth are encouraged to register with companies through email to receive "exclusive deals" which enable the food marketing companies to engage with youth outside of the social platforms. These strategies influence brand loyalty and ultimately lifelong purchases.

Food Marketing in Schools (5)

School based food marketing involves a presence of brand names, logos and trademarks around the school. Examples of food marketing in schools include:

- Posters and signs
- Websites and apps promoted for educational purposes but feature food advertisements
- Vending machines, food or beverage containers, food display racks and coolers
- Advertisements in school publications including yearbooks, websites, newsletters, electronic signs, score boards, sports equipment and jerseys, and on school computer monitors and screens
- Fundraisers that encourage students, families and communities to sell or purchase food products
- Free samples, taste tests or coupons

Call to Action (6)

Reversing the trend of marketing unhealthy food to children will require initiatives at all levels. It is imperative that youth are aware of how food manufacturers use marketing to influence their taste preferences, purchasing behavior, and eating habits. School communities can help to limit the amount of marketing that reaches youth by considering the following initiatives:

- Use nonfood rewards for positive behaviour in the classroom or during school events
- Offer healthy food options in the school rather than low nutrient foods and candy
- Refuse to allow companies to market within the school by displaying logos, brand names or characters on posters, signs, sports equipment or vending machines
- Decline “fast food” coupons for student prizes or incentives
- Advocate for businesses close to the school to stop marketing unhealthy food to children

For more information visit: www.uconnruddcenter.org and www.foodmarketing.org.

References

1. World Health Organization. Protecting children from the harmful effects of food and drink marketing. September 2014 [cited 2015 Oct 8]. Available from: www.who.int/features/2014/uk-food-drink-marketing/en/
2. Friedman, R. Food Marketing to Children and Adolescents - What Parents Think. Rudd Center for Food Policy and Obesity at Yale University January 2013 [cited 2015 Oct 8]. Available from: www.uconnruddcenter.org/files/Pdfs/Parent_Survey_Policy_Recommendations.pdf
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5. Rudd Center for Food Policy and Obesity at Yale University. Schools, families and communities: Food Landscape in Schools (cited 2015 Oct 8]. Available from: www.uconnruddcenter.org/food-landscape
6. Centre for Science in the Public Interest. Food Marketing to Children [cited 2015 Oct 15]. Available from: www.foodmarketing.org/resources/food-marketing-101/food-marketing-to-children/

Determinants of Health

The determinants of health (DOH) are physical, social, and individual factors that influence the health of people and communities. The primary factors that influence our health are not medical treatments or lifestyle choices, but rather our living conditions (1). The DOH are the conditions in which people are born, grow, live, learn, play work, and age (2).

The determinants of health can include (1, 3):

- Income and social status
- Food security
- Social support networks
- Employment/working conditions
- Social environments
- Physical environments
- Healthy child development
- Biology and genetic endowment
- Health services
- Gender
- Culture
- Personal health practices and coping skills

Although individual lifestyle choices affect health outcomes, it is important to understand that other factors have an impact on health as well (3). For example, decisions about what foods to eat and how much to eat are not simply matters of personal choice, but also of circumstances and environments. Below is a story looking at one of the determinants of health, income, and how it can affect health and food choices:

- The Smith's family refrigerator is broken.
- Although the family is able to pay rent, they do not have enough money to fix the refrigerator.
- Because they cannot store perishable items with a broken refrigerator, the family does not purchase many dairy products, vegetables and fruit, or meat.
- Since these foods are not purchased, their diets may lack key nutrients such as protein, carbohydrates, healthy fat, fibre, and many vitamins and minerals.
- If their diets lack these nutrients, they have an increased chance of feeling fatigued, being sick, developing chronic diseases, and not being able to learn or work well during the day.
- If they are not able to perform well during the day the children may fall behind in school and the parents may struggle at work or lose their jobs.
- If the parents are unable to work enough, there will be less money to spend on food, rent or to fix the refrigerator.
- This stressful situation impacts the health of the family.

Even though individuals are educated about healthy eating and know what to eat for health, research shows that knowledge is not enough to translate into behaviour change (4). To help support others in

making healthy food choices, it is imperative to ensure adequate income and to make healthy food choices more accessible to all.

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Healthy Eating for Children and Youth

Healthy Eating is about *how* to eat, as well as *what* to eat. Healthy eating practices for children and youth include:

- sitting down to eat with others,
- eating without distractions or screens,
- trying new foods,
- cooking more often
- eating mindfully,
- eating foods that are minimally processed, and
- choosing a balanced variety of enough healthy food

Developing and maintaining healthy eating practices during the preteen and teenage years is important for health, growth, and cognitive development. Research shows that the eating habits developed at this age carry on to adulthood.

Eating nutritious meals and snacks helps children and youth meet their daily nutrient needs for healthy growth and development. To help sustain energy, children need to eat small amounts of food on a regular schedule.

Eating Breakfast

It is important to start every day by eating breakfast. Breakfast replenishes energy lost during a night's sleep. Skipping breakfast may result in missed nutrients, and fatigue.

A healthy breakfast includes vegetables or fruit, whole grain and protein foods. Examples of breakfasts include:

- Whole grain cereal, milk, banana
- Whole wheat toast, scrambled egg, orange
- Plain oatmeal, yogurt, berries
- Whole grain bagel, nut butter, apple
- Whole grain tortilla with beans and cheese

Healthy Snacks

Snacks that include vegetables and fruit, whole grains and protein foods help children meet their daily nutrient needs. Healthy snacks include food from Canada's Food Guide. Examples of healthy snacks include:

- fruit with yogurt dip
- sliced vegetables with hummus (chickpea dip)
- whole grain crackers with cheese
- half of a sandwich and milk
- fruit and yogurt smoothie

Sometimes there is confusion regarding snacks. Some foods advertised as “snack foods” are high in fat sugar and salt such as chips, candies, soft drinks, chocolate covered granola bars, cookies, fruit flavoured snacks, and cakes. These are not healthy snacks and should not be served or sold in schools.

Lunch and Supper

Family meals eaten at home are important for the growth and development of children and youth. Kids who eat meals at home tend to eat healthier (1). Sitting down together and talking about the day during meal times helps family members manage stress. For youth, family meals are linked to a lower risk of substance abuse, sexual activity, depression, and school problems (2). A healthy lunch or supper includes foods as outlined in Canada’s Food Guide.

Mindful Eating

The average person makes many decisions about food and eating daily. These decisions can include what and how much food to eat, whether or not to eat breakfast, or what size of cup or plate to use. Many of these food and eating decisions are made without thinking much about it. Mindful eating is a way to be aware of every bite of food you eat and every sip of drink you take. When eating mindfully, you look at the colours of the food you are about to eat, you smell the aroma of the food, and feel the texture of it when you take a bite. You also take your time eating to be able to truly enjoy and appreciate your food.

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Weight Bias

Weight bias refers to negative attitudes towards people due to their weight. These negative attitudes result in stereotypes, prejudice and unfair treatment towards these people. Weight bias can be expressed in multiple forms, such as name-calling, teasing, physical aggression, cyber bullying, rumors, and social exclusion (1, 2, 4, 5, 7, 8). Not only can this be embarrassing for a child or youth, it can also have serious consequences on their physical, social and psychological health (4, 5, 8). Weight bias towards children and youth most often occurs at school and at home (5, 8).

Why does weight bias happen?

Weight bias occurs because we live in a culture where there is a perception that being thin is desirable (but not *too* thin, because these people may be stigmatized as well) (1). Our culture also tends to believe that people are responsible for their life situation and “get what they deserve”. Despite research suggesting that body weight is determined by a complex interaction of genetic, biological and environmental factors, most people believe that weight gain or loss is under personal control (2,3).

We are exposed to misleading messages about weight from various means such as television, movies, books, magazines, social media and websites. A consequence of these messages is that it is thought to be socially acceptable to judge people’s characters, personalities and behaviours based on weight. When family members, friends, and education professionals reinforce these false messages, individuals are stigmatized (1).

How does weight bias affect students?

Students who experience teasing or discrimination because of their weight can have low self-esteem, poor body image, and are more likely to experience symptoms of depression and anxiety (1, 5, 8). These students are also more socially isolated, less likely to be chosen as friends, and more likely to engage in suicidal thoughts and behaviours (5, 8). Children and youth who experience weight biases are more likely to try unhealthy weight control measures, binge eat, and avoid physical activities (4, 5, 8). Research shows that children and youth who have been victimized because of their weight report missing more days of school, and experiencing lower expectations by their teachers, which can result in poorer academic performance (4, 6, 7, 8).

Taking Action

All people deserve safety, respect, and acceptance in their community and classroom. Just as we should not tolerate racial or gender bias toward others, we should not tolerate weight bias (1). If you witness weight bias occurring in your school, intervene right away. To learn how to address weight bias within your classroom and school, refer to the resources found at www.uconnruddcenter.org/weight-bias-stigma-schools-and-educators

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Health Promotion Strategies: Making the Healthy Choice the Easy Choice

There are many factors that influence eating behaviours of children and youth, and the school food environment is one of those factors. Schools exert tremendous influence over students' eating habits and have been described as “the ideal settings to establish and promote healthy eating practices” (1). There are strategies used by industries and school communities that can encourage health enhancing and health-compromising behaviours in students in and around schools.

Healthy foods served and sold in school

Non-food rewards

When students are given food or candy for good behaviour or for doing well in school, it can teach them to eat as a reward instead of eating when they are hungry and stopping when they are full. Non-food rewards can promote healthier school and home environments and show that food is something to feed our bodies when we are hungry and not a reward.

Healthy or non-food fundraisers

Raising money in schools is a common practice and sometimes involves the sale of food items. Students could get a confusing message about healthy eating if the fundraising activities are not done in healthy way.

Nutritious foods and healthy eating at school

Often foods and beverages are served or sold in schools through cafeterias, canteens, nutrition programs, vending machines, classroom celebrations and other school events. Schools have the opportunity to offer nutritious foods and beverages and to model what is taught in the classroom. Modeling healthy habits and creating positive environments for students to explore foods is important. The attitudes and behaviours children and youth develop around foods and beverages impact lifelong eating habits and long term health. Repeated exposure to foods, including growing, preparing and tasting foods, is another effective way to influence eating behaviours. For examples of activities refer to page 4 of this document.

Food Marketing

Although food choices are affected by many factors, food marketing plays a key role. Food marketing attracts the attention of children and youth, influences their foods and beverages choices, and prompts them or their parents to buy specific products.

See table on next page...

Strategy	Health compromising	Health enhancing
Product	Market research identifies what students consider to be 'cool'. Often these foods are high in fat, salt and sugar while low in nutritional value.	As a school community, conduct surveys and hold taste tests to find out what students consider to be 'cool'. Get students involved in planning what healthy food and beverage products will be served and sold in the school.
Price	Unhealthy foods and beverages often have lower prices compared to healthy options (e.g. dollar menus).	If healthy foods and beverages are priced lower than the unhealthy alternatives, students may be more likely to buy the healthier products.
Placement	Product placement refers to the paid presence of branded products in movies, vending machines, and canteens. This form of food advertising frequently showcases foods and beverages of poor nutritional quality and influences student food choices. Unhealthy foods are often easily accessible and visible everywhere we go.	Placing healthy food options in highly visible places such as at eye level in vending machines and at the register of canteens and cafeterias can positively influence food choice. Make healthy foods more accessible and available in schools than unhealthy foods making the healthy choice the easy choice.
Promotion	Celebrity and athlete role models who endorse food and beverage products influence students to choose these products. Unhealthy food and beverage products and company logos advertised on TV, internet, magazines, on sports jerseys, vending machines, flyers, billboards and posters all influence product choice. Sneaky marketing strategies are often used to make food products look healthier than they really are. For examples see page 7 of this document.	Role models at school such as teachers and principals can influence student food and beverage choices. Be a positive influence and role model healthy eating habits in front of students. Advertise only healthy foods and beverages in schools.

Resources for Health Enhancing Strategies in Schools

Videos:

- Healthy Schools, healthy communities: www.hamilton.ca/people-programs/public-health/healthy-schools/healthy-schools-approach Rec Facilities and sporting events: everactive.org/projects/hosting-healthy-sporting-events/

Steps to Creating a Healthy Food Environment at School:

- School food policy that is communicated, implemented and enforced - *Nourishing Minds* (Guide/Manual to help in developing a school nutrition policy), *Healthy Foods for my School* (tool for selecting healthier foods to serve and sell in schools that meet the guidelines as laid out in *Nourishing Minds*), and *Planning Healthy Menus for my School* www.saskatchewan.ca/government/education-and-child-care-facility-administration/services-for-school-administrators/student-wellness-and-wellbeing/nutrition
- Policy readiness tool (to help engage others in developing a school food policy) - abpolicycoalitionforprevention.ca/portfolio-posts/policy-readiness-tool/
- Alberta Health Services www.albertahealthservices.ca/assets/info/nutrition/if-nfs-marketing-healthy-choices.pdf “*Marketing Healthy Food Choices*”

Non Food and Healthy Food Fundraising

- Ideas for non-food rewards (Information Sheet) – Public Health Nutritionists of Saskatchewan www.rqhealth.ca/service-lines/master/files/9276811_8_Food_Rewards_nutrition_poster_March_2019.pdf
- Healthy fundraising ideas www.albertahealthservices.ca/assets/info/nutrition/if-nfs-healthy-fundraising.pdf

Healthy Eating in the Classroom

- Action Schools! BC healthyschoolsbc.ca/media/22429/asbc-eat-smart-celebrations.pdf *Eat Smart Celebrations*

Gardening

- School Community Gardens: School Ground Greening (Guide/Manual) - SK School Boards Association saskschoolboards.ca/wp-content/uploads/2015/08/07-06.pdf

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Developing and Implementing SMART Goals

Setting goals is an important skill to be able to transform ideas into reality. Goals provide a long-term vision for success and motivation. It is important to support students in the process of setting and implementing their goals. One acronym that is often used when setting goals is SMART, which stands for:

Specific: Being specific about what is to be accomplished is important to be able to actually implement the goal. For example, instead of saying, “I want to eat better”, a more specific goal would be “I will eat more vegetables”.

Measurable: If you can measure your goal, you will know when you have achieved it. It is important to be able to track progress. Rather than saying “I will eat more vegetables,” try “I will eat vegetables at both lunch and supper at least 3 times a week.”

Attainable: Encourage students to find goals that are within their ability and skills. Discuss how to deal with barriers that might get in the way of achieving goals. If the goal is to eat more vegetables, are vegetables readily available or are there barriers to accessing vegetables. Some goals will require support from trusted family and friends. When students develop goals, ask them if they will require help from others. For example, a student may need parents to purchase more vegetables. If this is not possible, perhaps the goal could be altered to include actions over which the student has control, for e.g., if the school has a snack or lunch program, eat vegetables that are offered, or choose a new goal, such as choosing white milk instead of chocolate milk at lunch.

Realistic: Encourage students to develop goals that they are willing and able to work towards. Suggest students choose small, attainable goals, which are easier to track and provide ongoing reinforcement rather than choosing one large goal. Remind students to celebrate small successes to keep motivated.

Time-based: Students need to set specific deadlines for starting and completing their goals. For example, “I will eat vegetables both at lunch and supper at least 3 days a week for 2 weeks.”

Students may adjust goals if needed. Goal setting is a chance to learn about oneself and how to handle challenges.

People often start a program to make change, but then struggle to keep with it. Students could use these ideas to help stay on track:

- Write down a list of benefits of achieving goals.
- Identify challenges and make a plan for how to deal with them, e.g. If the goal is to eat more vegetables but the school doesn't offer many, be sure to pack a lunch.
- Communicate goals to trusted friends and supportive family.

The middle years can be a time of anxiety for students who experience body changes as they enter adolescence. In response they may want to alter their body shape or size, such as weight loss, or

increase muscle mass. Because these actions can lead to unhealthy behaviours, it could be beneficial to encourage students to develop healthy body image SMART goals. An example is below:

Specific: I will appreciate my body for all it does; *Measurable:* Every time I think of or say something negative about my body I will list one thing my body does for me and one thing I like about my body; *Realistic:* Because this may be a new process for students, it can be helpful for them to have a list of things they appreciate about their bodies. *Time-based:* For the next three weeks, every time I think of or say something negative about my body, I will list one thing my body does for me and one thing I like about my body.

Taking Action on Healthy Eating

As part of the Saskatchewan Ministry of Education, Health Education curriculum, students are required to analyze certain health behaviors and to identify certain actions that are unique to their needs to improve their health.

It is important that students focus on healthy eating actions that are positive, measurable and practical. For example, a student could choose to drink milk at noon instead of a sugary drinks such as iced tea. SMART goals are one way to help students set Specific, Measurable, Attainable, Realistic and Timely goals. SMART goals are one way of setting goals that meet with success and so more likely to motivate students to make change.

Below are ways children can take action for healthier eating and ways classroom education can support those actions:

- **Snacks:** Snacks are a part of healthy eating patterns to help keep energized, help satisfy hunger between meals. Prepare healthy snacks with students in the class, or have some on hand in case students don't have good access at home.
- **Vegetables and Fruit:** Canada's Food Guide recommends that at meals about half of your plate be filled with vegetables and fruit. A student could decide to try tasting one new vegetables or fruit each week. In the classroom, try highlighting a vegetable or fruit each month and encourage students to try something new.
- **Breakfast:** Since there is a strong link between eating breakfast and learning, student actions can focus on breakfast. Students could aim to have breakfasts following the Canada's Food Guide Snapshot. Have students list quick breakfast ideas (e.g. yogurt, fruit, and cereal) or encourage students to attend the breakfast program if your school has one. If your school does not have a breakfast program, consider keeping a snack basket in the school office for students who come to school without breakfast. Encourage students to get involved in making their own breakfast if they do not already do so. Encourage students to get creative with their breakfast. Cereal and toast are not the only options for breakfast. Try some fun ideas such as a tortilla with peanut butter wrapped around a banana or a blended fruit and milk smoothie with a whole grain muffin.
- **Food Skills:** When kids are involved in food preparation and cooking, it encourages healthy habits that can last a lifetime. Food preparation activities provide children with the opportunity to try new foods and to develop positive attitudes and behaviours around food and eating. Introducing snack preparation activities in your classroom can be a great way to teach kids about foods and foster the development of food skills. Consider starting an afterschool cooking program so students can learn to make healthy snacks.
- **Family Meals:** If students do not regularly eat family meals, they might set a goal to have at least 2 meals together with their family each week. Family meals help encourage healthy habits and promote family connectedness. Brainstorm with students conversation starters for the dinner table to encourage conversation and make mealtimes fun. For more information see Family Meals (page 8).

- **Eating without distractions:** If students normally eat their after school snacks while watching a screen, they might set a goal to eat that snack sitting down somewhere with no distractions for 2 days a week. Distracted eaters pay less attention to what and how much they eat; they eat faster, eat more, and feel less full and satisfied after eating. As a class, try a mindful eating activity and encourage students to try this during their after school snack. See **Outcome USC 6.4** *What is Healthy Eating (page 6)* for mindful eating activity ideas.

When asking students to take action on healthy eating, it is important to consider students may not be able to control the types or amounts of foods that are available to them. Refer to page 18 regarding factors influencing health choices. Support people will be integral to helping achieve success on action plans; this could include parents, siblings, and other adults in the school.

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Factors Influencing Eating Behaviours in Youth

*Food = food and drinks

At a first glance, what determines youths' eating behaviour appears to be purely a matter of personal choice, but research shows there are so many other factors that come into play (10). These factors can include: what is available to them at school and in their community, income and the cost of food, what foods and diets have been most heavily marketed to them, cultural food norms, pressures to be a certain body size, busy schedules and convenience, and so much more (10).

When healthy food options are more available, affordable, accessible, and culturally appropriate, youth will be more likely to choose them. When youth have few healthy food options, are the targets for unhealthy food marketing, and are regularly offered unhealthy options, they often end up choosing those which are high in sugar, salt, and unhealthy fat.

Personal Factors

- **Hunger and Fullness** - We are born with the ability to feel hunger and fullness; however, many things can interfere with this as we age, such as: irregular meal patterns, adults' expectation for youth to eat a certain amount of food, and rewarding youth with food (e.g. candy for getting a question right, etc.).
- **Food Preferences** – We are born with innate preferences for sweet and aversions for bitter taste (10). There are also social and cultural norms that help to shape our food preferences, including what we learn from family, friends, and our culture. The foods that taste the best to, are most readily available, comfort us, and are most heavily marketed, often become what we like best.
- **Emotions** - Over eating, under eating or eating different foods can happen in response to different emotions. The association between emotion and food is normal, but it can be problematic if it becomes the usual way to deal with emotions.
- **Nutritional Knowledge and Perceptions of Healthy Eating** – Perceptions about healthy eating are shaped by our social surroundings and can change over time. Youth are often able to show a general understanding of the connections between food choice and health, however, in these age groups, knowledge often does not influence food choice as much as other factors (5).
- **Self-esteem and Body Image** - Media images of unrealistic body sizes and shapes, along with comments from family, friends, and role models about weight and dieting can influence youths' body image and self-esteem. This in turn can increase the risk of unhealthy dieting behaviours. Talking about healthy eating and physical activity for health benefits without focusing on weight, size and shape can promote a positive body image in children and youth. See weight bias backgrounder on p. 22 for more.

Factors at Home

Influences on eating habits at home can include whether families have:

- **enough income** to be able to afford to buy enough acceptable, culturally appropriate and nutritious foods. The most important barrier to healthy eating is inadequate income (11).

- **access** to healthy foods in the community or transportation to get it somewhere else. Neighbourhoods where there is limited access to affordable nutritious food but easy access to unhealthy food make it difficult for families to purchase healthy food.
- **food skills** such as grocery shopping, being able to plan and prepare healthy and tasty meals, gardening and preserving.
- **enough time** to grocery shop, plan, and prepare a meal with busy work schedules, extracurricular activities and responsibilities.
- **proper kitchen equipment**, such as a stove and refrigerator, to prepare and store healthy foods.
- **regular family meals**. Youth who participate in family meals on a regular basis tend to eat better than those who do not.
- **cultural eating practices**. Culture can influence what foods are selected, how they are prepared and served, and how and when foods are eaten. Traditional food practices are often associated with healthier eating, more affordability and a passing on of cultural knowledge.
- **multiple stressors** such as difficulty paying rent, finding a place to live, finding employment, or caring for ill family members often take priority over healthy eating.
- **specific beliefs** such as vegetarianism, religious beliefs, or beliefs around what healthy eating is can all impact the types of foods that are consumed in the household.

Factors outside the Home

Schools, community and surrounding area - When healthy foods are more accessible, more affordable and better advertised in and around the school, this makes it more likely youth will eat them (4). When students have greater access to unhealthy foods, such as fast-food restaurants and convenience stores nearby or highly processed foods served and sold right in the school, this makes it harder for them to make healthy choices.

It is also important for adults not to criticise or judge youth based on the types or amounts of food they consume, as this can actually lead to poorer eating habits, not better (5, 6, 7).

Involvement in different types of physical activities - Participation in sports and other physical activities can influence youths' eating habits. As they learn about the role of healthy eating and exercise, youth may choose healthier food options (if they are available). In addition, sports such as wrestling, football, gymnastics and dance, in which body size plays a role, also impact youths' eating habits.

Recreation facilities provide a space for physical activity, but unhealthy food choices are often readily available (8). Also, many unhealthy foods such as energy drinks, soft drinks and fast food are marketed by professional athletes or promoted by some coaches, and can influence youth eating habits.

Public Policy – policies at the local, regional and national level can have a significant impact on our collective food choices and this can act as determinants of healthy eating. Effective policies can help ensure our environments can produce enough food to eat, can guide Canadians towards healthier food choices without thinking much about it, and can help ensure people can afford the foods they need (10).

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Body Composition and Health Risks in Children and Youth

Weighing and measuring students in schools

Measuring children and youth within the school setting can be more harmful than beneficial. Children and youth are often teased about their size and shape. Measuring weight or body composition at school can increase the amount of teasing children may already be receiving. Regardless of their size or shape, children and youth may be pressured to try harmful diets. Body composition can influence health but research has shown that shaming people for their size does not improve their health (1).

All students need to be physically active, eat well, and have positive mental health regardless of their size and shape. It is important to be supportive of all children and youth by keeping the focus **on** health and wellness and **off** size and shape.

There are a number of measures that can be used to estimate body composition in relation to health risks.

BMI for Age

BMI (Body Mass Index) for Age is the recommended way for health care providers to assess growth and estimate body composition in children. Research has linked childhood BMI to health quality in adulthood (2). The calculation below is used to determine BMI.

$$\text{BMI} = \frac{\text{weight in kilograms}}{\text{height in metres}^2}$$

BMI for children and youth **MUST** be interpreted differently than BMI for adults. Because children and youth are growing and developing, their body composition changes frequently. As a result, **BMI for children and youth MUST be interpreted by using the appropriate BMI for Age charts and NOT adult BMI charts.** When health care providers assess growth, several measurements over a period of time are used instead of one measurement at one point in time.

Skin fold thickness measurements

Skin fold thickness measurements are not recommended for use in schools and fitness facilities. There is a **high potential for error** due to the difficulty in obtaining accurate measurements. Most importantly, skin fold calipers measure subcutaneous fat (fat that is found under the skin). Subcutaneous fat, although still part of overall weight, is not the most concerning fat for health. Visceral fat (fat stored in the abdomen), found close to internal organs, is the type of fat that is associated with health risks and often cannot be measured using skin fold measurements (3).

Regardless of the technique used, body composition should only be measured and used by a trained healthcare provider as part of a total health assessment to accurately evaluate disease risk.

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Built Environments Impact Our Eating Habits and Physical Activity

The built environment refers to the human-made surroundings where we live, work, learn, and play (1). These environments influence our eating habits and physical activity levels. A healthy built environment creates places where the healthy choice is the easy choice (2).

Healthy Eating

The types of foods and beverages children and youth are exposed to influences the foods and beverages they prefer. On average, children and youth consume 1/3 of their daily nutritional needs at school (3). When children and youth have limited choice of healthy foods and beverages at school, they often end up choosing options which are high in fat, salt and sugar. Easy access to unhealthy foods and beverages in vending machines, canteens or nearby convenience stores and restaurants compels children and youth to eat these foods particularly when healthier options are not available. When healthy foods and beverages are affordable, accessible and appealing, it becomes easier and more likely for children and youth to make healthy choices (4).

For ideas of ways to promote healthy eating at school refer to *Health Promotion Strategies: Making the Healthy Choice the Easy Choice* on page 24 of this document.

Physical Activity

The built environment can promote or hinder physical activity. Well -designed neighbourhoods, schools, transportation systems and protected natural environments can contribute to encouraging children and youth to be active (1).

A healthy neighbourhood environment supports and encourages all types of physical activity, including walking, cycling, roller skating and skateboarding. Clear sidewalks, bike lanes, safe crosswalks and well-lit walking paths all contribute to supporting physical activity in a neighbourhood. This environment makes it easier for children and youth to walk/bike to school, and for students and teachers to walk when going on field trips. Having a safe place to park their bikes at school will also encourage students to bike to school. A clean and safe green space surrounding schools and safe, age appropriate playground equipment encourages children and youth to spend time outside, running, playing and exploring (1).

Listed below are other ways to promote physical activity at school.

- Encourage children and youth to play during recess and lunch hour.
- Have indoor games and activities prepared for when weather conditions are unfavourable to be outside.
- Have structured noon hour activities for children and youth such as intramurals.
- Have daily physical education classes scheduled for all grades.
- Use fundraisers and activities that encourage physical activity such as skipping marathons or dance clubs.
- Provide standing desk options for children and youth.
- Incorporate physical activity breaks in the classroom.

- Provide learning opportunities outdoors. Children and youth are more active when they are outside.

For more information about the built environment and school see www.saskatchewaninmotion.ca/priorities/let-them-walk/teacher.

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Keeping Brains and Bodies Moving: Calories and how we use them

Calories are a unit of measure for the energy we get from food (1). The food and beverages we consume ultimately break down into energy that our bodies use (2). The number of calories (i.e., how much energy) we need each day is specific to each person; it is based on multiple factors such as our genetics, sex, activity level, and body composition (2). Children and youth need to eat enough food each day to provide them with the amount of energy required for basic body functions and activities.

Metabolism is the process of all the reactions that take place in the body to break down and use the food we eat. The exact amount of energy needed daily is difficult to measure because there are many different factors that determine energy needs. We need energy for basic functions like breathing, circulating blood, growing and repairing cells, and adjusting hormone levels. Physical activity, including cardiovascular activity, also affects energy needs. The more physically active we are, the more energy our bodies need.

Cardiovascular activity offers many health benefits when incorporated into a regular wellness routine. Some of the benefits include a healthier immune system, a stronger heart, and an improved mood (3). Being active for 60 minutes a day can help youth do better in school, grow stronger, have fun playing with friends, feel happier, improve their self-confidence, and learn new skills (4).

Link to brain function

Calories are only one component of food. Food provides us with many nutrients we need to survive and be healthy. Rather than choosing foods based on the number of calories it contains, it is important to choose foods that are high in nutrients. Regular healthy eating patterns are associated with higher test scores and overall stronger academic performance (5).

Calories and weight

Calories in versus calories out is often used to describe energy balance and thus how to achieve a healthy weight. However, the reality is that body weight is complex and determined by many factors. Simply focusing on *calories in* versus *calories out* is too simplistic and not appropriate. Positive routines consisting of nutritious foods, healthy eating habits, physical activity, positive mental health, and regular sleep patterns can contribute to achieving and maintaining good health for all students regardless of weight.

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Nutrition trends/fad diets

Many new diets and supplements come out each year advertised as being the best for gaining muscle, losing weight or enhancing sport performance. Diet programs, however, are not regulated in Canada (1), and nutrition information can be found everywhere and come from anyone. The hard part is knowing which source of information to believe.

A fad diet is a popular diet that usually promises weight loss. A fad diet often sounds “too good to be true,” and likely does not follow healthy eating guidelines that support good health and athletic performance. Red flags to watch out for include (1):

- Promises weight loss of more than 2 pounds (1 kg) per week.
- Does not provide support for long-term weight loss success.
- Restricts you to less than 800 calories a day.
- Is rigid and does not fit into your lifestyle or state of health.
- Cuts out major food categories (like gluten or carbohydrates) and stops you from enjoying your favourite foods.
- Forces you to buy the company’s foods or supplements rather than show you how to make better choices from a grocery store.
- Uses “counsellors” who are actually salespeople. Weight management counsellors should not make a commission from anything you buy.
- Gives you nutrition advice that is based on testimonials rather than scientific evidence.
- Promotes unproven ways to lose weight such as starch blockers, fat burners and detox cleanses.
- Does not encourage physical activity.

Fad diets may be harmful

Fad diets that are too low in calories may mean individuals won’t get enough energy to do the activities they love. By cutting out major groups of foods, people may not get the nutrients their bodies need to be healthy. If people lose weight on fad diets too quickly with no support to help keep it off, they could get stuck in a cycle of weight loss and weight gain. This yo-yo dieting is stressful for the body (1) and often does not result in a sustained weight, which is the goal. Dieting may cause individuals to become preoccupied with food and weight, which can lead to disordered eating.

Impacts of Dieting on Physical Activity (2)

When you do not get enough calories from carbohydrate, fat and protein, your performance may not be the best it could be.

If you don’t get enough calories in the short-term:

- You may not see results from your training
- You may lose muscle tissue which may result in the loss of strength and endurance

If you don't get enough calories long-term:

- You may not get the vitamins and minerals you need
- Your immune system may be weakened
- Your hormone levels may be unbalanced
- You may have a higher risk of injury to muscles, bones or connective tissue
- Females may not menstruate regularly

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