



Land Acknowledgement

I want to acknowledge that I am on Treaty 6 Territory and the Homeland of the Métis and pay respect to the First Nations and Métis ancestors of this place and reaffirm our relationship with one another.



Agenda for Today's Session

Objectives:

- To discuss some common myths and truths regarding nutrition and oral health
- To introduce the patient resource, SMILE for Good Dental Health –to encourage better nutrition habits for caries prevention
- To discuss the benefits of incorporating the advice of a registered dietitian into your practice
- To introduce the Eat Well Saskatchewan service which allows residents to access a dietitian for free in Saskatchewan

Text CARRIEV to 37607 once to join

In your opinion, how important is nutrition in caries prevention?

There is no relationship between nutrition and caries development

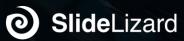
Nutrition plays a minor role in caries development

Nutrition plays a significant role in caries development

Diet is the the number one cause of caries development









The WHO recommends limiting ______ to less than <5% of energy to protect dental health throughout life.

A: Free Sugars

B: Added Sugars

C: Total Sugar

D: Sugar Sweetened Drinks



Text CARRIEV to 37607 once to join

The WHO recommends limiting ______to less than <5% of energy to protect dental health throughout life.

Free Sugar

Added Sugar

Total Sugar

Sugar Sweetened Beverages



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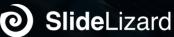
_____ is currently being promoted on the internet for the prevention and management of dental caries with no good evidence to support its claims.

A: Omega 3 fats

B: Vitamin C

C: Vitamin K2

D: Thiamin



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Omega 3 fats

Vitamin C

Vitamin K2

Thiamin



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A: Omega 3 fats

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A registered dietitian in Saskatchewan is different from a nutritionist in that a dietitian...

A: Has a degree from an accredited University

B: Can use the protected credentials RD

C: Is licensed to practice by the SDA

D: All of the above



Text CARRIEV to 37607 once to join

A registered dietitian in Saskatchewan is different from a nutritionist in that a dietitian...

Has a degree in nutrition and dietetics

Can use the protected credentials RD

Is licensed to practice by the Saskatchewan Dietitians Association (SDA)

All of the above





A registered dietitian in Saskatchewan is different from a nutritionist in that a dietitian...

A: Has a degree in nutrition and dietetics

B: Can use the protected credentials RD or P.Dt

C: Is licensed to practice by the SDA (reg body)

All of the above





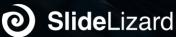
A 600 mL bottle of 100% unsweetened orange juice contains how many tsp of sugar?

A: 10 tsp

B: 4 tsp

C: 8.5 tsp

D: 0 tsp



A 600 mL of 100% unsweetened orange juice contains how many tsp of sugar?



A 600 mL of 100% unsweetened orange juice contains how many tsp of sugar?

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B: 4 tsp

C: 8.5 tsp

D: 0 tsp





SMILE For Good Dental Health

Why a Resource?

- A healthy diet and eating behaviors play a large role in caries prevention
- Gaps:
 - a) Knowledge and expertise in the area of nutrition and oral health is lacking for both the public and health professionals
 - Inter-professional collaboration between nutrition and oral health professionals is limited or non-existent





Knowledge is Lacking

- New area of practice in dietetics
- Widespread nutrition misinformation, including dental caries
- Caries development is complex and eating behaviours are complicated
- Dietitians already providing relevant, advice that overlaps with caries prevention





"Eat Less Sugar"



Text CARRIEV to 37607 once to join

How comfortable are you providing diet advice to your patients?

Very comfortable, I have the confidence and knowledge needed to provide diet advice to my patients

Somewhat comfortable, I can provide basic diet advice for my patients as needed

Not very comfortable, I have limited confidence and knowledge in providing diet advice to my patients

Not comfortable at all





Inter-professional Collaboration



- Collaboration between dietitians and oral health care professionals is recommended for oral health promotion and disease prevention and interventions.
- Both must learn to provide screening, education and referrals as part of comprehensive client/patient care.
- Dissemination of nutrition and oral health resources can enhance opportunities for collaborative research and education.



SMILE for Good Oral Health

- Goal to improve access to nutrition and oral health advice in Saskatchewan
- Acronym SMILE 5 key messages
- Created in partnership with Dr. Jessica Lieffers and Usask nutrition student Jordyn Grantham
- Co-Branded with College of Dental Surgeons of Saskatchewan

For more information:

https://yoursaskdentist.ca/eat-well-for-good-oral-health/











Review of the Literature – 5 Key Components

- 1. Sugar sweetened beverages
- 2. Free sugar intake
- 3. Length of exposure/physical food form
- 4. Frequency of intake
- 5. Overall healthy eating to support good oral health





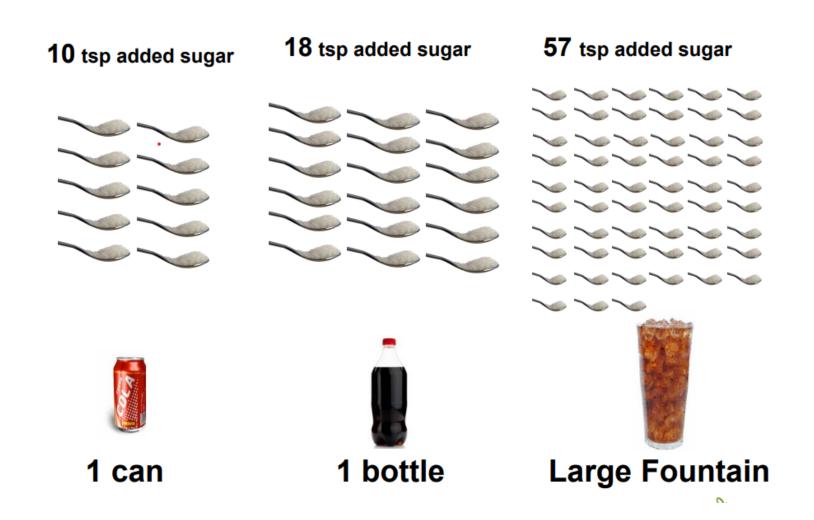
Sip on water more often.

All sugary drinks are very hard on teeth.

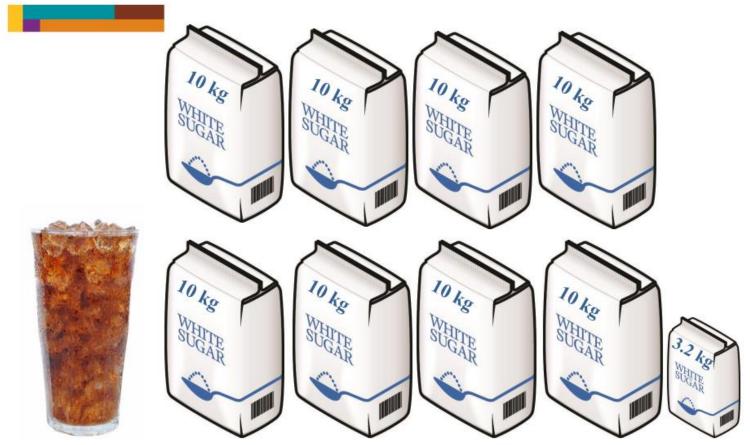




Portions are Increasing







Large Fountain Pop Every Day For A Year

Total: 83.2 kg sugar



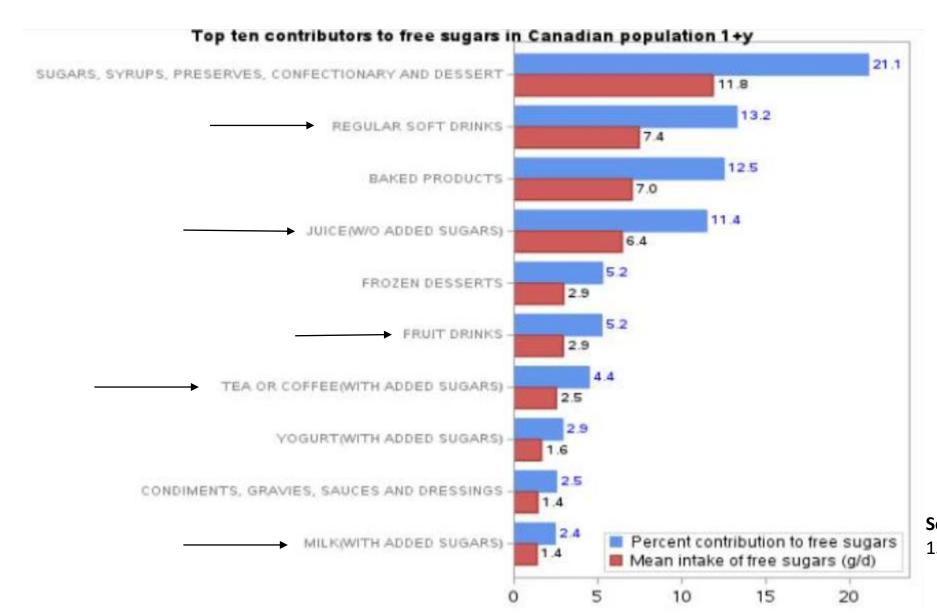
Why Focus on Sugary Drinks?

- Strong association between sugary drink consumption and dental caries.
- Substantial contribution to the total sugar intake of Canadians, especially among adolescents.
- 2004 2015 sale of sugary drinks have increased significantly:
 - a) Energy drinks (638%),
 - b) Sweetened coffees (579%)
 - c) Flavoured waters (527%)
 - d) Sweetened teas (36%)
 - e) Flavoured milks (21%)
 - f) Sports drinks (4%)

Source: Heart and Stroke Foundation. Liquid Candy: Working Together to Reduce Consumption of Sugar Loaded Drinks. 2013.



Canadian Community Health Survey Nutrition 2015



Source: Rana et al. Nutrients. 2021 May; 13(5): 1471.

BE WHAT THE WORLD NEEDS



Recommendation for Caregivers



Limit sugary drinks, including pop and 100% fruit juice to ½ cup per day.



Mask the effects of starchy and sugary foods that are hard on teeth.





Starchy and Sugary Foods

Abundant evidence that links **sugar as the major dietary factor** affecting
dental caries prevalence and
progression.





Free Sugars

- Free Sugars
 - "monosaccharides (such as glucose, fructose) and disaccharides (such as sucrose or table sugar) added to foods and drinks by the manufacturer, cook or consumer, and sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates." (WHO, 2015)
 - ***Monosaccharides and disaccharides easily fermented by plaque bacteria***

- WHO recommends reducing free sugar intake to less than 10% of total energy intake and 5% for a further decrease in risk of dental caries
 - 10% of energy intake: ~12 teaspoons of sugar on a 2,000kcal diet
 - 5% of energy intake: ~6 teaspoons of sugar on a 2,000kcal diet

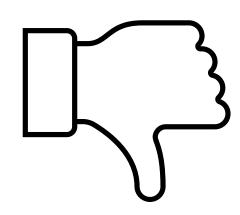
BE WHAT THE WORLD NEEDS



What are Canadians Consuming?

According to the Canadian Community Health Survey in 2015:

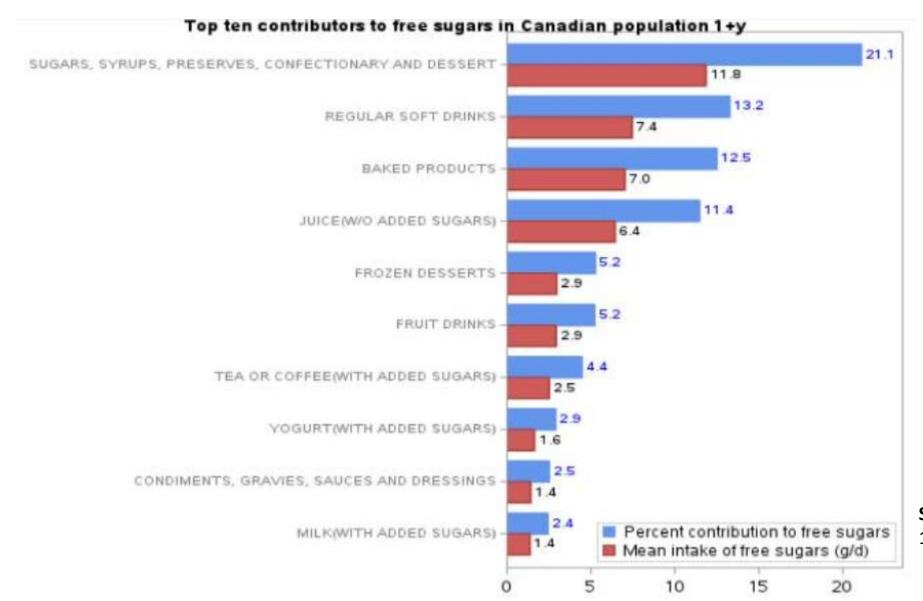
- Residents of Canada consumed an average of 67.1 g free sugar (13.3% total energy) per day.
- Only about 1/3 (33.8 %) of Canadians had free sugar intake
 <10% of their total energy.
- Only 5.4% of Canadians had free sugar intake <5% of their total energy.



Source: Liu S, Munasinghe LL, Ohinmaa A, Veugelers P. Added, free and total sugar content and consumption of foods and beverages in Canada. Health Rep. 2020 Oct 21:31(10):14-24 Available from: https://www150.statcan.gc.ca/n1/pub/82-003-x/2020010/article/00002-eng.htm



Canadian Community Health Survey Nutrition 2015



Source: Rana et al. Nutrients. 2021 May; 13(5): 1471.

BE WHAT THE WORLD NEEDS



Starchy Foods

- Digestion of starches begins in the mouth with salivary amylase
- Rice, potatoes, and corn contain starch, but the glucose strands are long and therefore hard for salivary amylase to break down
 - But if starchy foods are trapped/kept in the mouth for a long time, salivary amylase would have time to break them down into fermentable carbohydrates
 - About half as cariogenic as sucrose

BE WHAT THE WORLD NEEDS



Starchy Foods

- Starches that are more broken down (e.g., processed, cooked such as potato chips) are more cariogenic than starches that are not
 - Stick to teeth and also are easier to be broken down by salivary amylase to be fermented by bacteria

- Foods that are rich in free sugars and starches (e.g., bread and jam, cakes, pastries, sugary cereals) are more cariogenic than either alone
 - These sticky foods cause sugar to be trapped giving plaque bacteria more time to produce acid

BE WHAT THE WORLD NEEDS



Recommendation for Caregivers



- Include starchy and sugary food with other foods that can help 'scrub' away sugars.
- After eating, encourage and help little ones rinse their mouths with water, chew sugar-free gum or brush their teeth.

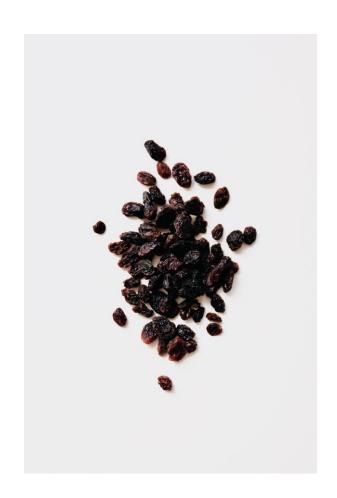


Identify sticky and slow dissolving foods and liquids that stay in the mouth too long.





Length of Exposure / Physical Form



- A sticky and retentive carbohydrate remains in contrast with the enamel surface and increases exposure of the tooth to an acid attack.
- Sticky foods, such as raisins; slowly dissolving candies; sugary starchy snacks, such as cookies, cakes, etc.; and simple sugars, such as sucrose, honey and molasses are more cariogenic
- Babies put to bed with bottles major cause of early childhood caries

Source: Stegeman and Ratliff Davis, 2019



Recommendation for Caregivers



Eat sticky and slow dissolving foods and liquids less often and be sure to remove bottles and sippy cups from a baby's mouth and crib before bedtime.



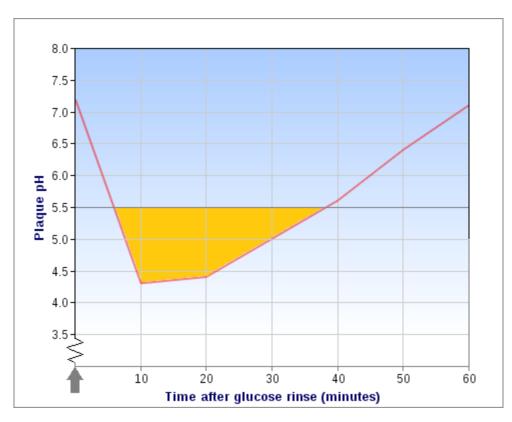
Listen to your hunger. Eating too often can lead to tooth decay.





Frequency of Intake

- Longer periods of oral exposure to a fermentable carbohydrate lead to a greater risk of demineralization and less opportunity for teeth to re-mineralize
- With each exposure, a decrease in pH begins within 2 to 3 minutes, at a pH of 5.5 or less, enamel decalcification occurs
- Within 40 minutes the pH has increased to its initial value

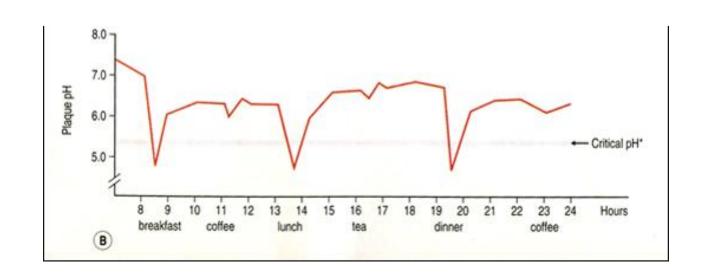


Stephan Curve

BE WHAT THE WORLD NEEDS



Stephan Curve





Recommendation for Caregivers



Aim for scheduled meals and snacks at regular intervals at least 2 hours apart. Kids need 3 meals and 2 to 3 snacks per day.



Energize with foods that support good oral health.





Recommendation for Caregivers



Aim to eat whole grains, dairy products, vegetables, fruits and lean proteins such as wild meat, chicken, fish and nuts more often.

Are you aware of the new Canada Food Guide that launched in 2019?

Yes

Nc

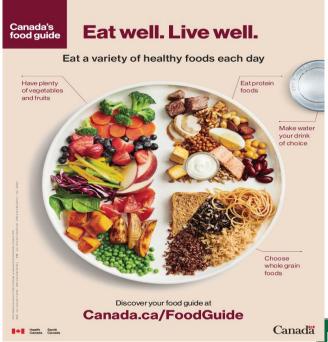




Canada's Food Guide

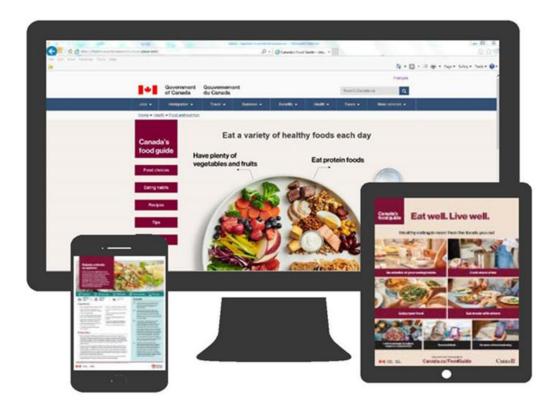
- Revised in 2019
- Update with latest nutrition science
 - Sodium, saturated fat, sugar
- Make more user friendly
- Less prescriptive
 - No serving sizes or recommended number of servings
- Focus on how we eat, not just what







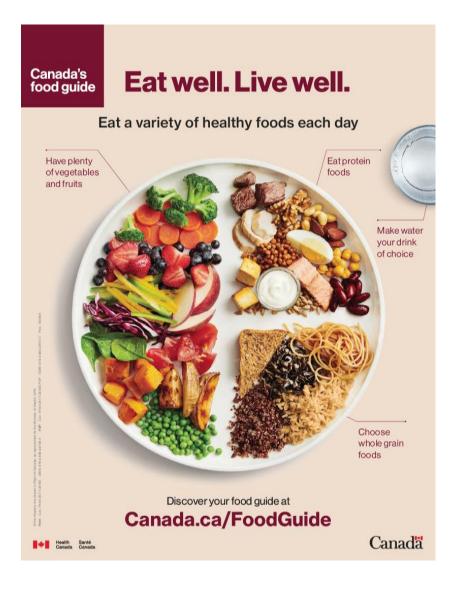
Online Resources



Canada.ca/FoodGuide



Eat a Variety of Healthy Foods Each Day



Recommendations:

- Eat plenty of vegetables and fruits
- Choose whole grain foods
- Choose protein foods that come from plants more often
- Limit highly processed foods.
- Make water your drink of choice
 - Replace sugary drinks with water
- Choose healthier menu options when eating out
- Use food labels
- Be aware that food marketing can influence your choices



Limit Highly Processed Foods

- Whole or unprocessed foods typically contain zero sucrose
- Processed foods may contain up to 2% sucrose
- Ultra-processed foods may contain over 20% sucrose
 - a) Account for 90% of all added sugars in the diet
 - b) Cheap, ready to consume, high in fat and sugar and low in fibre
 - c) Examples: boxed/packaged baked goods and snacks, soft drinks, frozen convenience meals, chicken nuggets, instant noodles and soups, cereals, crackers, boxed or packaged potatoes and rice and reconstituted meats.





Vegetables, Fruits and Oral Health

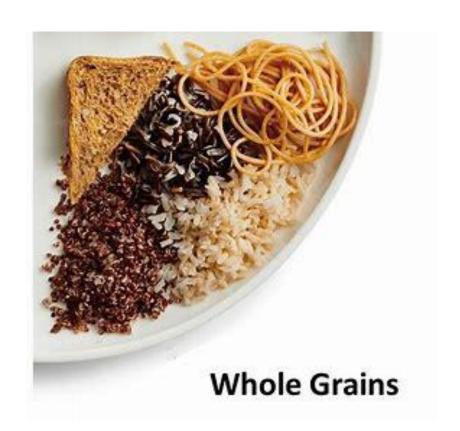
- Do contain some fermentable carbohydrates, but are considered to have a low cariogenicity
 - High water content
 - Eating these foods stimulates saliva production due to these foods being chewy and fibrous
- 100% fruit juice is cariogenic and provides fermentable carbohydrates for plaque bacteria
 - Limit 100% fruit juice to 125mL or ½ cup a day for most children (Canadian Pediatric Society)





Grain Products

- Choose whole grains more often
- Complex carbohydrates less damaging to enamel
- Processed starches, such as instant oatmeal are more fermentable than their non-processed counterpart
- Consuming starches with free sugars (i.e. bread and jam) more cariogenic than alone





A Note about Milk Products

- Lactose is cariogenic, but is not as cariogenic as other common sugars
- Phosphorus, calcium, and milk proteins (primarily casein) are all anti-cariogenic (e.g., buffers)
- Cheese may be protective regarding dental caries (often recommended at end of meal)
 - Contains anti-cariogenic nutrients
 - Chewing cheese stimulates saliva production





Healthy Fats

- Include unsaturated fats
 - Fish
 - plant oils
 - nuts and seeds and nut butters
 - o flax, chia
 - avocados
- Limit intake of saturated fats
 - Red meat
 - High fat dairy
 - Processed meats
 - **Coconut**





Focus on Healthy Eating Habits

- It is also about where, when, why and how you eat.
- Be mindful of your eating habits
 - Take time to eat
 - Notice when you are hungry and when you are full
- Cook more often
 - Plan what you eat
 - o Involve others in planning and preparing meals
- Enjoy your food
 - Culture and food traditions can be a part of healthy eating
 - Eat meals with others





Resource for your Practice

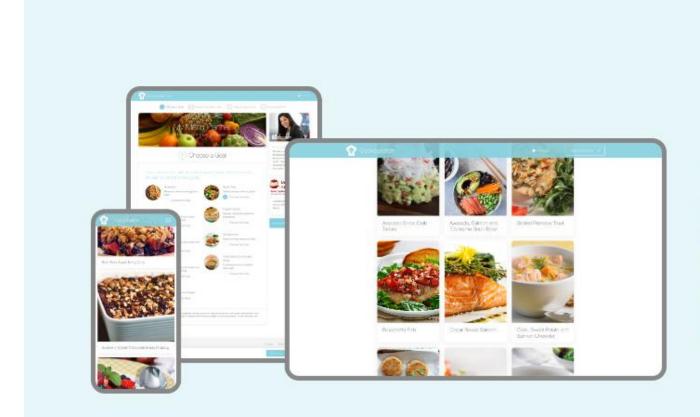
- Available in poster size
- Tear Pads Alliance for a Cavity Free Future(ACFF) - Collaborative International Community based grant





Tools – Cookspiration

https://www.cookspiration.com/



With you everywhere

Be inspired to cook any time, day or night with Cookspiration, created by Dietitians of Canada. Recipe ideas are served up to suit your mood and schedule. Also, don't forget to try the all new My Menu Planner tool!



UnlockFood.ca



- Dietitians of Canada
- Evidence based nutrition information for patients
- Recipes, videos, online tools
- Find a Dietitian

Have you ever accessed or referred your patient to a registered dietitian for caries prevention/management?

Yes

No



What is a Dietitian?



- "Dietitians are health professionals who use expertise in food and nutrition to enhance the lives and improve the health of Canadians. Practicing in a wide range of settings, we use our unique knowledge and skills to meet the varied concerns and interests of the diverse population of Canada."
 - Integrated Competencies for Dietetic Education and Practice (ICDEP) – Version 3.0 (2020)



Where do dietitians work?

- Hospitals
- Community clinic
- Schools
- Supermarkets
- Private practice
- Food service
- Research institutes/centres
- Public health
- University
- Food Companies
- Government

- Gyms/fitness centers
- Tribal councils
- Correctional facilities
- Call centers
- Long term care homes
- Professional association/regulatory bodies
- Military
- Home care
- Corporate wellness
- International organizations
- Nonprofits

AND MANY MORE!!!!



Who are dietitians in Canada?

- Meet strict education criteria
 - 4-year undergraduate degree in food and nutrition and
 >1,250 hours (~35 weeks) of supervised hands-on training in various areas as a practicum
 - The undergraduate degree and practicum must be accredited
 - Must pass a registration exam
 - They are <u>regulated professionals</u>



University of Saskatchewan Protected Titles for Dietitians in Canada

British Columbia	Registered Dietitian, Dietitian, RD
Alberta	Registered Dietitian, Dietitian, Registered Nutritionist, Nutritionist, RD, Dietetic Intern, Provisional Dietitian
Saskatchewan	Registered Dietitian, Dietitian, Professional Dietitian, RD, P.Dt
Manitoba	Registered Dietitian, Dietitian, RD
Ontario	Registered Dietitian, Dietitian, RD, diététiste professionel(le), Dt.P
Québec	Dietitian, Nutritionist, Dietician, RD, P.Dt, diététiste, nutritionniste, diététicien, Dt.P
New Brunswick	Dietitian, Dietician, Professional Dietitian, Registered Dietitian - Nutritionist, Registered Dietitian, P.Dt., R.D., RDN, diététiste, diététicienne, diététiste, diététicienne professionnelle, diététiste-nutritionniste, diététicienne-nutritionniste immatriculée, diététiste ou diététicienne immatriculée, Dt.P., Dt.I, Dt.N.I
Nova Scotia	Dietitian, Nutritionist, P.Dt
Prince Edward Island	Registered Dietitian, RD
Newfoundland and Labrador	Registered Dietitian, Dietitian, RD



What is a Nutritionist?

 "A nutritionist is a person who studies nutrition and/or provides education or counseling in nutrition principles."

- "This individual may or may not have an academic degree in the study of nutrition, and may or may not actually work in the field of nutrition."
 - Academy of Nutrition and Dietetics Definition of Terms List June 2017
- All dietitians are nutritionists; not all nutritionists are dietitians



Unregulated Titles

- The following titles related to nutrition are unregulated:
 - Registered Holistic Nutritionist (RHN)
 - Certified Nutritional Practitioner (CNP)
 - Certified in Holistic Nutrition
 - Certified Holistic Nutritional Consultant (CHNC)
 - Registered Nutritional Consulting Practitioner (RNCP)
 - Registered Orthomolecular Health Practitioner (ROHP)
 - ?Others



Interdisciplinary Collaboration is Important

- Symbiotic and bidirectional relationship
- Bidirectional referrals
- Partnerships and integrated practice opportunities
- Interdisciplinary education, research and policy development





When to Refer

 Any infants and young children with dental caries can benefit from a referral for dietary counseling

High Risk:

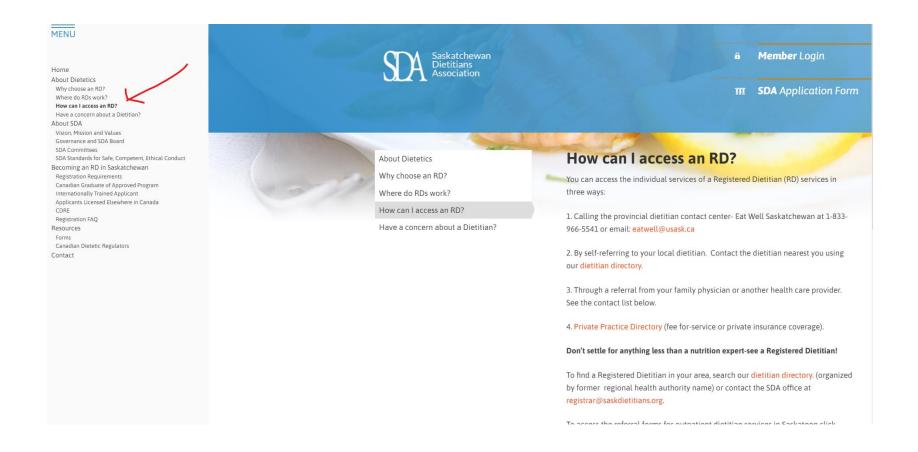
- Those with reoccurring caries
- Multiple nutrition risk factors or barriers
- Beyond what can be provided at chair side





How to Access a Dietitian in Saskatchewan

- SHA
- Private practice
- Community dietitians/Tribal Council
- Eat WellSaskatchewan
- Extended Health Benefits





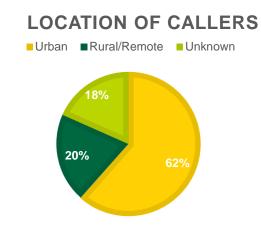
- Dietitian Contact Service that provides reliable nutrition advice and education through a toll free phone line, email and via social media
- Launched in 2019 currently funded by Indigenous Services Canada and the University of Saskatchewan
- Have provided service to over 2500 residents in over 170 different communities
- Access to a dietitian from anywhere in Saskatchewan, both public and professionals
- Provide general guidance and advice
- Link to community and evidence based resources



Who is using our Service

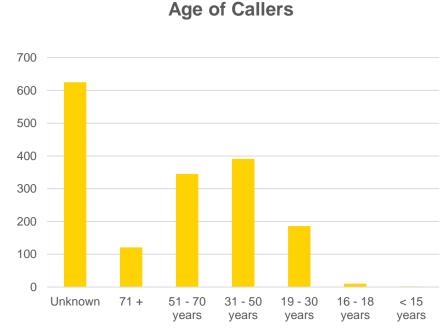
Who is Calling?

- General public
- Educators
- Health professionals
- Media



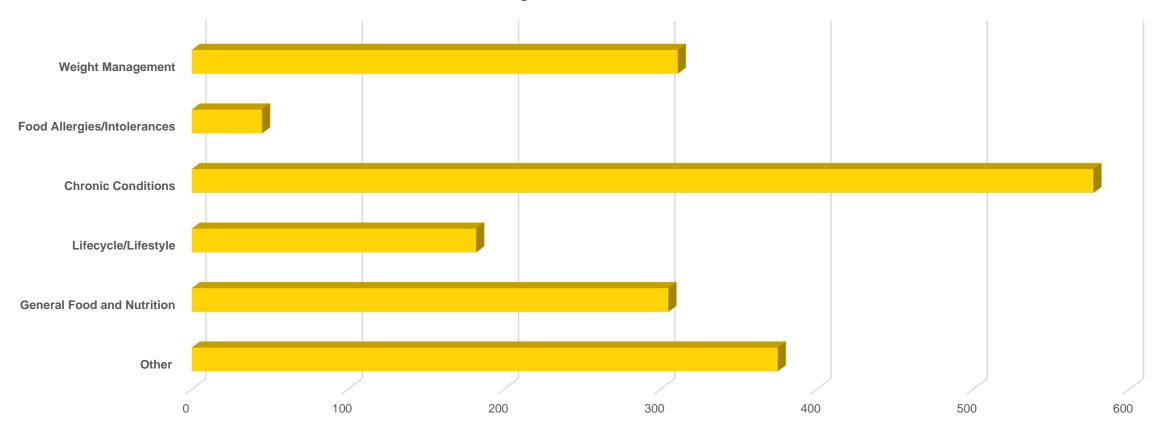
How do Residents Become aware of EWS?

- HCP Referral 39%
- Unknown 29%
- Internet search 11%
- Other 13%





Commonly Asked Questions







Social Media

- Utilize Facebook, Instagram, TikTok and Twitter to deliver evidence-based nutrition education in an innovative and creative way
- Created various campaigns reached over 500,000 residents
- #ratemyplate, #eatwellchampion, #goodforyou, #eatwellcovid19
- Respond to trends, misinformation and recalls in timely fashion
- Reach younger demographics



Not just a Contact Centre!

- Research published in the Journal of Medical Internet Research
- Mentorship –students from nutrition and other disciplines
- Public Education

 awarded
 provincial, national and
 international grants
 - a) TikTok campaigns
 - b) Covid19 and social media project
 - c) Indigenous Champion calendars
 - d) SMILE for good oral health























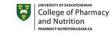














Advocacy

February 2021:

 Testimony on northern food security for the House of Commons Standing Committee on Indigenous and Northern Affairs



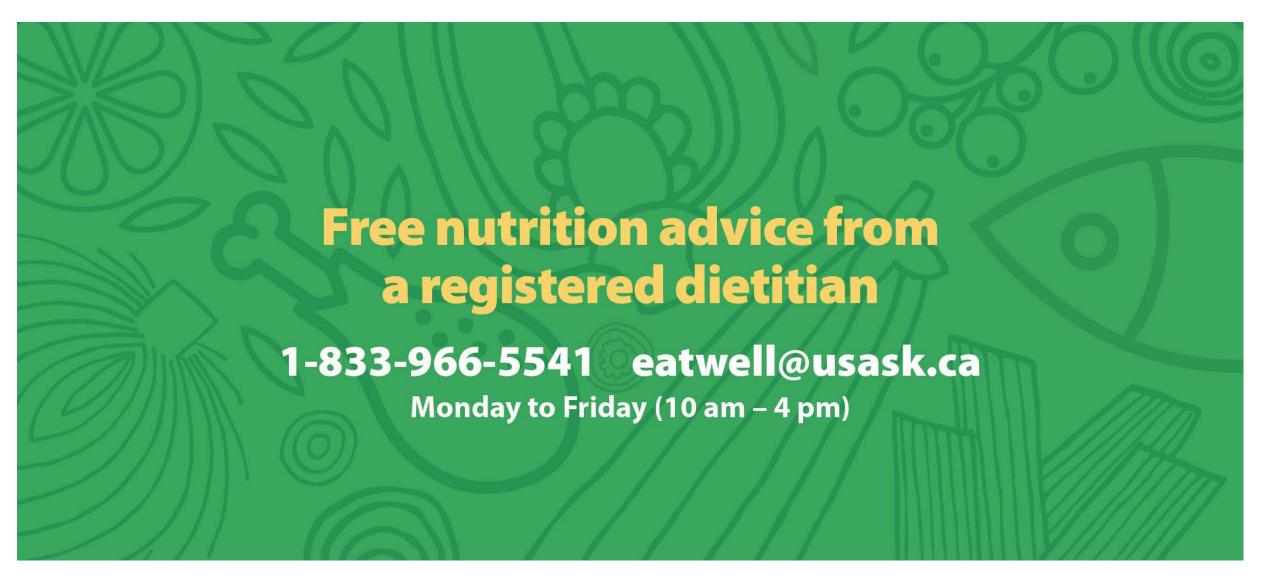


We are filling a Gap

- Removed barriers to access i.e. childcare and transportation
- Helping residents to access credible information in a timely manner
- Accessible during pandemic
- Indigenous reach
- Nutrition for caries prevention big potential!









Final Thoughts

- Nutrition plays a big role in caries prevention big gap!
- Misinformation is widespread
- Collaboration between diet and oral health professionals can help reduce caries and benefit both practices
- SMILE for Good Oral Health nutrition for caries prevention
- A dietitian can help EWS is free, accessible and timely



