



Guelph Family
Health Study

RECENT ADVANCES OF THE DAIRY RESEARCH GROUP AND GUELPH FAMILY HEALTH STUDY



A. BUCHHOLZ, G. NEWTON,
J. HAINES, DWL MA

UNIVERSITY OF GUELPH



Canada's
food guide

Eat well. Live well.

Eat a variety of healthy foods each day

Have plenty
of vegetables
and fruits

Eat protein
foods

Make water
your drink
of choice

Choose
whole grain
foods



50% to >90%
probability of
inadequate calcium
& vitamin D

Barr SI. Appl Physiol Nutr
Metab, 2019.



DAIRY AND CARDIOMETABOLIC RISK: PRELIMINARY FINDINGS IN PRESCHOOLERS



SHEREMETA J, DUNCAN AM, DARLINGTON G, HAINES J,
MA DWL, BUCHHOLZ AC, NEWTON G.





BLOOD LIPIDS*

	Total cholesterol	LDL (“bad”) cholesterol	HDL (“good”) cholesterol	Triglycerides
Total dairy				
Total milk				
<i>Low fat milk</i>				
Cheese				
Yogurt				

*adjusted for BMI Z-score, waist circumference, family income and parental self-reported health



BLOOD LIPIDS*

	Total cholesterol	LDL (“bad”) cholesterol	HDL (“good”) cholesterol	Triglycerides
Total dairy				
Total milk				
<i>Low fat milk</i>				
Cheese				
Yogurt				

*adjusted for BMI Z-score, waist circumference, family income and parental self-reported health



BLOOD LIPIDS*

	Total cholesterol	LDL (“bad”) cholesterol	HDL (“good”) cholesterol	Triglycerides
Total dairy	↓	↓		
Total milk				
<i>Low fat milk</i>				
Cheese	↓	↓		
Yogurt				

*adjusted for BMI Z-score, waist circumference, family income and parental self-reported health



BLOOD LIPIDS*

	Total cholesterol	LDL (“bad”) cholesterol	HDL (“good”) cholesterol	Triglycerides
Total dairy	↓	↓		
Total milk				
<i>Low fat milk</i>				↑
Cheese	↓	↓		
Yogurt			↓	

*adjusted for BMI Z-score, waist circumference, family income and parental self-reported health



BLOOD SUGAR, INFLAMMATION*

	Glucose	Insulin	HbA1c	hsCRP
Total dairy				
Total milk				
<i>Low fat milk</i>				
Cheese				
Yogurt				

*adjusted for BMI Z-score, waist circumference, family income and parental self-reported health



BLOOD SUGAR, INFLAMMATION*

	Glucose	Insulin	HbA1c	hsCRP
Total dairy	Light blue	Light blue	Light grey	Light blue
Total milk	Light blue	Light grey	Light blue	Light blue
<i>Low fat milk</i>	Light grey	Light grey	Light blue	Light grey
Cheese	Light blue	Light blue	Light blue	Light blue
Yogurt	Light blue	Light grey	Light grey	Light grey

*adjusted for BMI Z-score, waist circumference, family income and parental self-reported health



BLOOD SUGAR, INFLAMMATION*

	Glucose	Insulin	HbA1c	hsCRP
Total dairy				
Total milk				
<i>Low fat milk</i>				↓
Cheese				
Yogurt		↓		

*adjusted for BMI Z-score, waist circumference, family income and parental self-reported health



BLOOD SUGAR, INFLAMMATION*

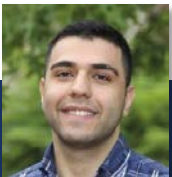
	Glucose	Insulin	HbA1c	hsCRP
Total dairy			↑	
Total milk		↑		
<i>Low fat milk</i>	↑	↑		↓
Cheese				
Yogurt		↓	↑	↑

*adjusted for BMI Z-score, waist circumference, family income and parental self-reported health

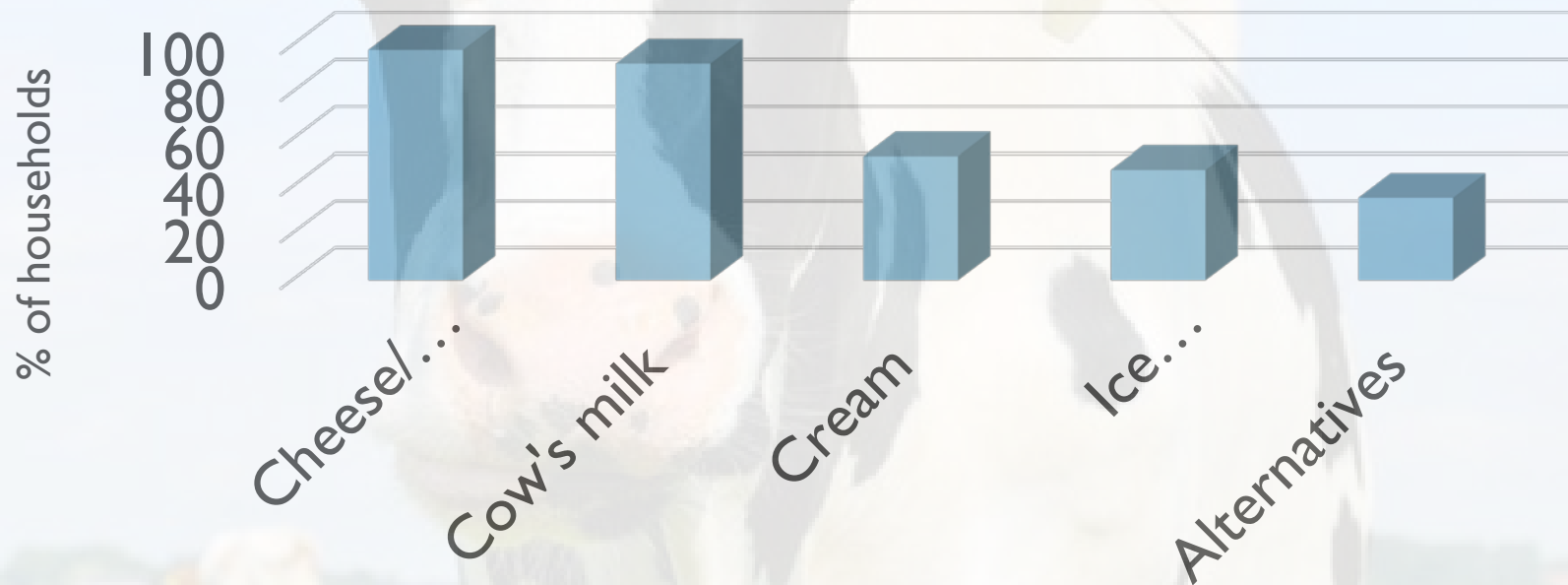


DAIRY AND PLANT-BASED ALTERNATIVES PURCHASES OF FAMILIES WITH PRESCHOOLERS

LAILA A, BOECKER A, DUNCAN AM, DARLINGTON G,
HAINES J, MA DWL, VON MASSOW M, WALLACE A,
NEWTON G, BUCHHOLZ AC
CAN J DIET PRACT RES, UNDER REVIEW



WHAT ARE FAMILIES PURCHASING?



...AND FROM WHERE?

% of households

100
80
60
40
20
0

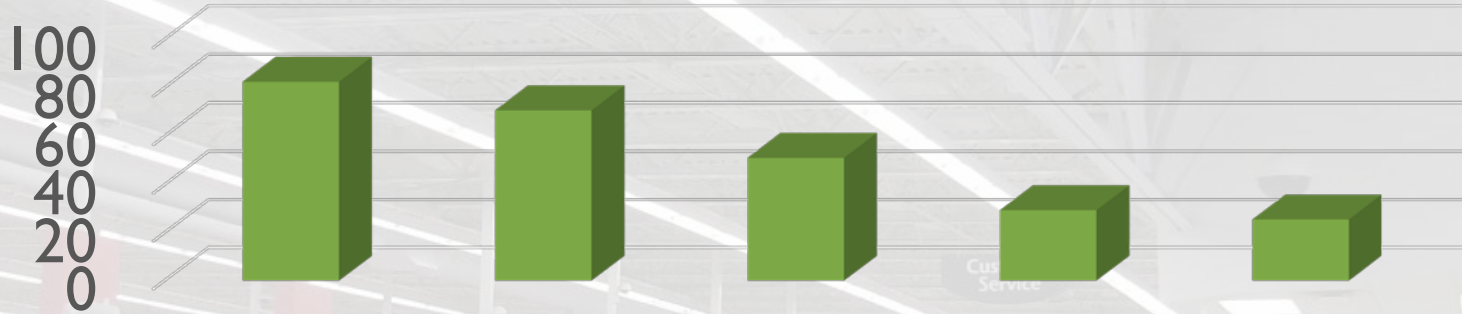
Big box

High-end

Discount

Local/other

Midrange





nutrients



Review

Interventions Aimed at Increasing Dairy and/or Calcium Consumption of Preschool-Aged Children: A Systematic Literature Review

Victoria Srbely ¹, Imtisal Janjua ², Andrea C. Buchholz ³ and Genevieve Newton ^{1,*}



10,755 records



14 studies

5/14 improved preschoolers' dairy/calcium intake

9/14 did not

Focused on dairy

Targeted parent *and* child

General nutrition education and/or parenting

Targeted parent *or* child

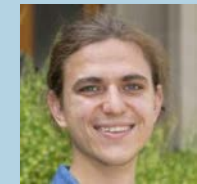


DAIRY RESEARCH GROUP: *NEXT STEPS*

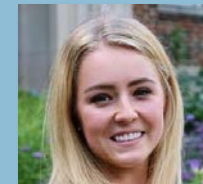
Dietary intake and sources of calcium, vitamin D
in preschoolers

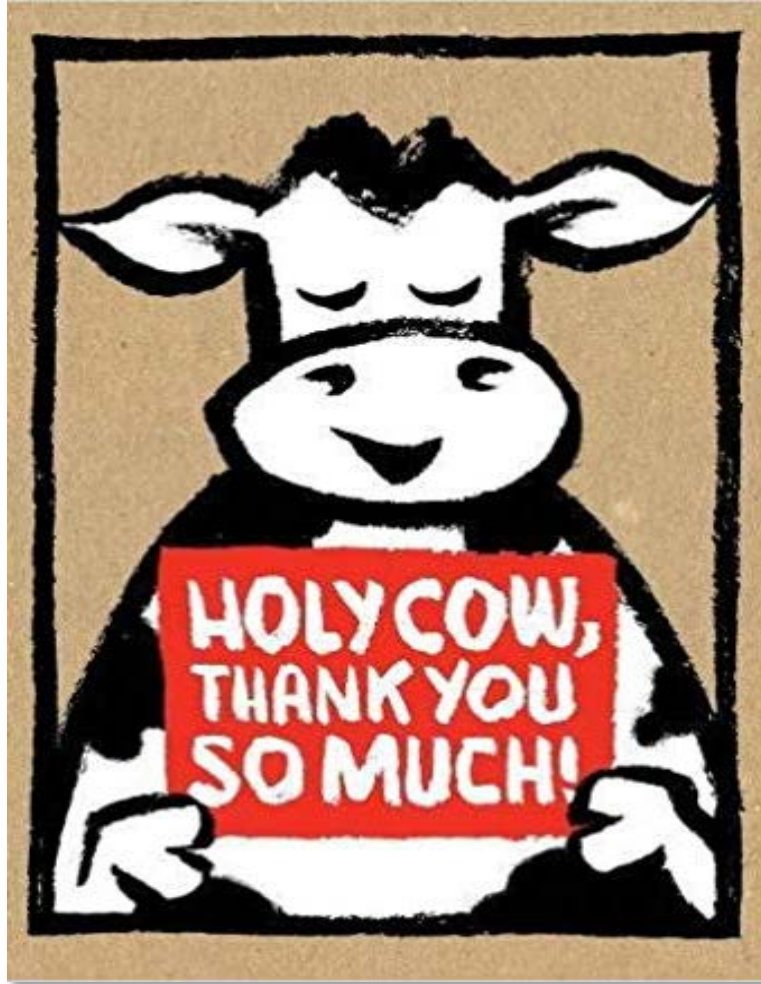


Dairy-based fatty acids and cardiometabolic risk in
preschoolers



Knowledge mobilization to increase
dairy purchase, consumption in families







DAIRY RESEARCH GROUP (EST. 2016)

- 10 MSc, undergraduate students
- 3 manuscripts
- 2 national conference presentations
- 1 KT grant
- 1 podcast

