Improving Food and Nutrition for Community Dwelling Older Adults; Opportunities for Product Development

OMAFRA Food for Health Research Forum
Healthy Eating for Healthy Aging
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Alison M. Duncan, Ph.D., R.D.
Professor
Department of Human Health & Nutritional Sciences
University of Guelph
Presentation Outline

• Background
  • Aging and Health
  • Functional Foods

• Research Examples
  • Functional Foods for Healthy Aging Toolkit

• Summary Notes
Aging is Becoming More Common

- Aging of the population will accelerate over the next 3 decades
- The number of Canadian adults >65 years old is projected to increase from 4.2 to 9.8 million between 2005 and 2036
- The “older adults” share of the population will increase from 13.2 to 24.5%

Statistics Canada, Census of Canada
Healthy Aging: Food and Health

• Relation of food and its constituents to health has evolved
  • Traditionally prevent deficiency disease
  • Now includes prevention of chronic disease
  • Evolution manifests in numerous policies

• Key example is advance of functional foods
  • Extension of how we relate food and food constituents to health
  • Major influence on research activity in food, nutrition and health
What are Functional Foods?

Simplest definition: Foods that may provide health benefits beyond basic nutrition

- Conventional food form
- Specific bioactive constituent
  - enhanced content in the food
  - added to the food
- Biological rationale to relate to health
A *functional food* is similar in appearance to, or may be, a conventional food that is consumed as part of a usual diet, and is demonstrated to have physiological benefits and/or reduce the risk of chronic disease beyond basic nutritional functions, i.e. they contain bioactive compound.
Functional Foods and Health: Relevance to Older Adults

- Functional foods have relevance to many areas of human health and this can apply to multiple life-stage and gender groups

- Among these life-stage groups, older adults emerge as a highly relevant beneficiary of FF
Functional Foods for Healthy Aging

RESEARCH Examples

• See Research Posters:
  – Spearmint tea high in antioxidants
  – Vitamin D in cheese
  – Puddings with dietary fibre
  – Rice with lentils

• Resistant starch in bagels

• Consumption and understanding of FF
Functional Food Research Example

Resistant Starch Bagels for Diabetes and Satiety
RESEARCH EXAMPLE

Resistant Starch Bagels for Diabetes and Satiety

Maize high in resistant starch (RS) from Plant Agriculture

Bagels produced by Canada Bread using high-RS corn flour

Human study to test effect of bagels on risk factors of diabetes and satiety

Funded by OMAFRA Food Research Program
Better Bagel Study: Study Design

- Randomized
- Double-blind
- Cross-over
**Better Bagel Study: Data Collection**

**Data Collection Schedule**

- **Study Days**: 1, 8, 15, 22, 29, 36, 43, 49, 57
- **OGTT**, **BodyMeas**, **Bagels**
- **OGTT**, **BodyWt**, **SensoryQ**
- **BodyWt**, **SensoryQ**
- **BodyWt**, **SensoryQ**
- **OGTT**, **BodyMeas**, **SensoryQ**

**3-DayFR**, **FecalSample**

**SatietyTest**

**3-DayFR**

**3-DayFR**, **FecalSample**

Daily activities: Consume study bagels, record in study diary
Exploration of Functional Food Consumption in Older Adults in Relation to Food Matrices, Bioactive Ingredients, and Health

MEAGAN N. VELLA, MSc, and LAURA M. STRATTON, MSc
Department of Human Health and Nutritional Sciences, University of Guelph, Guelph, Ontario, Canada

JUDY SHEESHA, PhD, RD
Department of Family Relations and Applied Nutrition, University of Guelph, Guelph, Ontario, Canada

ALISON M. DUNCAN, PhD, RD
Department of Human Health and Nutritional Sciences, University of Guelph, Guelph, Ontario, Canada
Functional Foods for Healthy Aging
Consumer Understanding

Understanding FF in Health and Disease among Older Adults

Factors that PROMOTE consumption

Consumption and purchase patterns

Factors that DISCOURAGE consumption

Awareness in relation to HEALTH

Sources of information

Preferred FF targets for
- Health
- Bioactive
- Food matrix

Sample characteristics: medical, lifestyle, demographics
Results:
Awareness and Consumption of Functional Foods

Timing of FF Consumption (n=200)

- 26% of participants aware of the term “functional food”
- Prevalence of FF consumption was 93%
- Majority (75.3%) of participants are consuming FF on a daily basis
Results:
Awareness and Consumption of Functional Foods

Top most frequently consumed functional food products (n=200)

- Yogurt with Probiotics
- Eggs with Omega-3 Fatty Acids
- Bread with Dietary Fibre
- Cereal with Dietary Fibre
- Orange Juice with Calcium and Vitamin D

Percent of Participants
Results: Functional Food Matrices and Bioactives

Food Matrices

- Yogurt/Yogurt Beverages
- Breads
- Cereals
- Eggs
- Beverages
- Margarine
- Pasta
- Crackers/Cookies
- Granola Bars
- Cheese
- Salad Dressing

Bioactives

- Dietary Fiber
- Omega-3 Fatty Acids
- Probiotics
- Antioxidants
- Prebiotics
- Plant Sterols
Results: Health Areas as they Relate to Functional Foods

Health areas addressed through the consumption of **Antioxidants** in functional foods

Health areas addressed through the consumption of **Dietary Fibre** in functional foods
Realizing Opportunities
Knowledge Translation and Transfer

• Key phase of research process

• Knowledge translation defined as:
  • Transformation of knowledge into use through synthesis, dissemination, and exchange among researchers and research users (OMAFRA 2011).

• Numerous knowledge translation strategies to disseminate research results to stakeholders
Toolkit Purpose
To provide guidance and materials to assist Registered Dietitians in communicating with older adults about functional foods for healthy aging

Development
- Weekly meetings with toolkit team to:
  - Discuss literature
  - Identify knowledge gaps
  - Determine toolkit content and main messages
  - Review and revise

Stakeholder engagement
- Presented toolkit to stakeholders to:
  - Seek feedback
  - Inform final version
  - RAWF Health Prof. Forum
  - CFDR AGM
  - Colleague extension
  - Final version Sept 2012
Section 1:
  - Understanding FF

Section 2:
  - Relevance of Functional Foods for Healthy Aging

Section 3:
  - Research Summary and Results

Appendices:
  - Resource & Educational Materials
Toolkit Launch

• January 2013 webinar to 400 participants hosted by the Canadian Foundation for Dietetic Research

• PDF of the toolkit available for download on the following websites:
  – Agri-food for Healthy Aging (A-HA)
  – Canadian Foundation for Dietetic Research (CFDR)
  – Dietitians of Canada (DC)

• Promoted through e-blasts and various social media outlets of A-HA, CFDR and DC

• Evaluated through downloads and online survey
Summary Notes

• Aging is becoming more common and functional foods are an exciting strategy to promote healthy aging

• There are multiple examples of functional foods being examined in research projects for their potential to advance optimal aging

• There are key functional food matrices and bioactive ingredients preferred among older adults and this information can be valuable to stakeholders

• The Functional Foods for Healthy Aging toolkit can be used as a knowledge transfer tool to aid Health Professionals in their interactions with older adult clients about functional foods
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