

# DIETARY BENEFITS AND MISCONCEPTIONS OF WHEAT CONSUMPTION

Samantha Ramsay, PhD, RDN, LD

Lauren Keeney, MS Candidate

University of Idaho

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# MYTHS ABOUT WHEAT...

- **Weight**

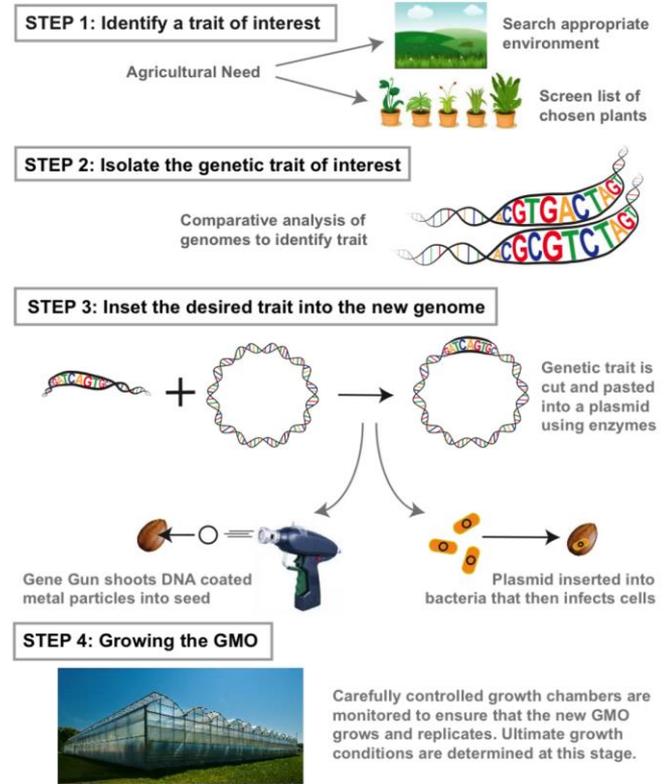


# MYTHS ABOUT WHEAT...

<http://sitn.hms.harvard.edu/flash/2015/how-to-make-a-gmo/>

## • GMOs

- Scientific community & the U.S. FDA use a stricter definition for a GMO: an animal or plant that has been created through genetic engineering [1], a term used to describe biotechnological methods used to manipulate an organism's genome.



# **NUTRIENT CONTENT OF WHEAT**

**(ADDITIONAL BENEFITS IN WHOLE WHEAT)**

- **Fiber**
- **B Vitamins (folic acid, thiamin, vitamin B6, riboflavin, niacin)**
- **Phytonutrients**

# **NUTRIENT CONTENT OF WHEAT**

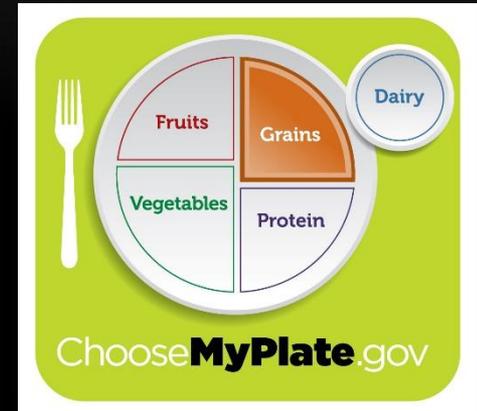
**(ADDITIONAL BENEFIT OF WHOLE WHEAT)**

- 
- **Iron**
  - **Manganese**
  - **Magnesium**
  - **Copper**
  - **Selenium**

# DGAS

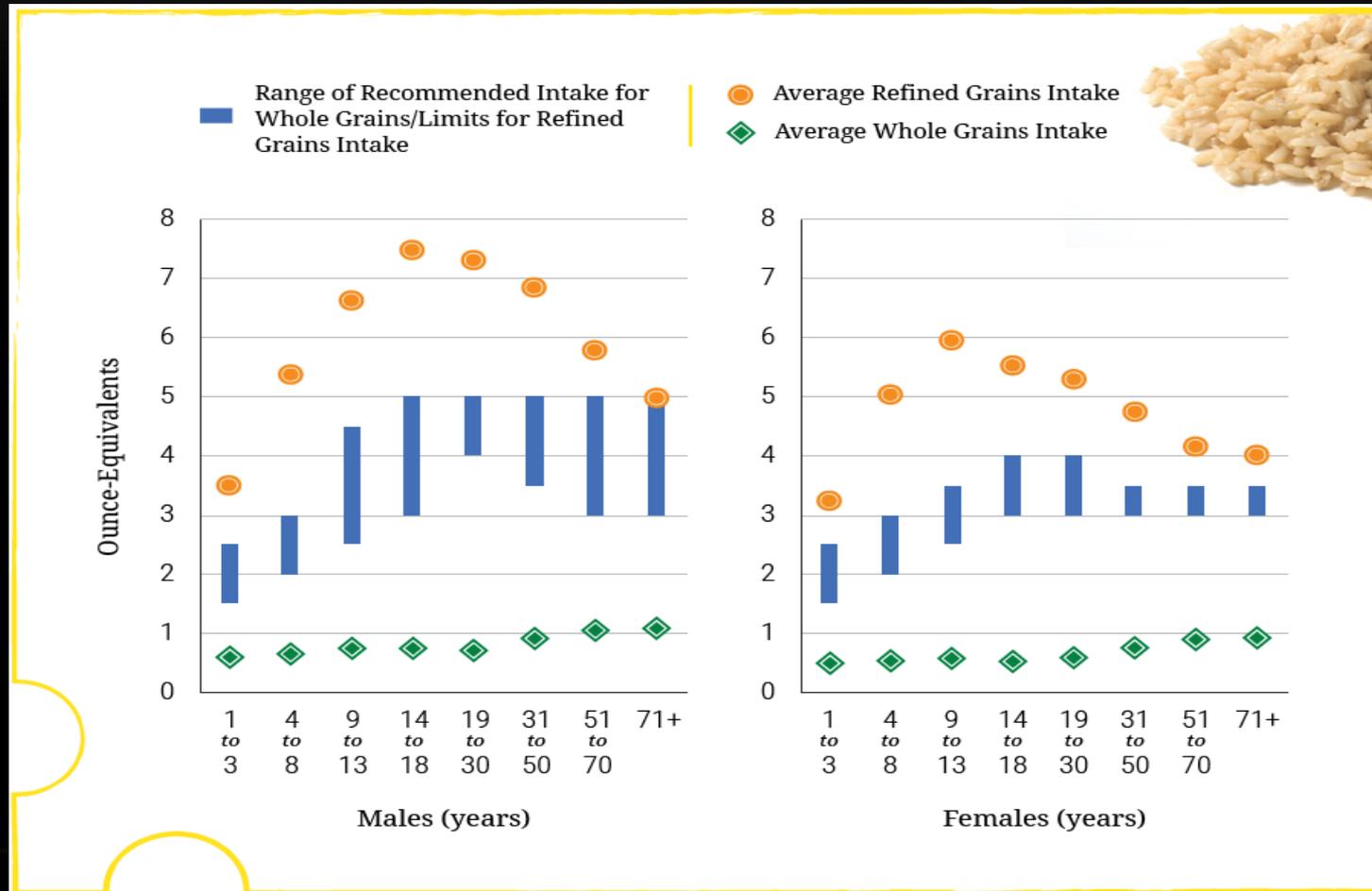
## WHOLE GRAINS & HARD WHITE WHEAT

- Maintained recommendation from 2010 Guidelines of 6 servings of grains daily, with **at least half of them whole grains**



- Report makes strong point that “average intakes of whole grains are far below recommended levels...and average intakes of refined grains are well above recommended limits for most”

# GRAIN CONSUMPTION



Source: 2015 Dietary Guidelines for Americans



# WHY LIMITED WHOLE GRAINS...

- Children and adults have distinct taste preferences (Birch et al. 1987).
- Generally, children prefer sweet and salty to bitter (Steiner, 1979), but whole grain products, such as hard red wheat bread, tastes bitter.
- Repeated exposure has been shown to help foster children's taste preference (Wardle et al., 2003). But it could take time...





**Bitter Response**



**OUR RESEARCH WITH WHEAT & WHOLE GRAINS...**

# WHOLE GRAIN BREAD CONSUMPTION

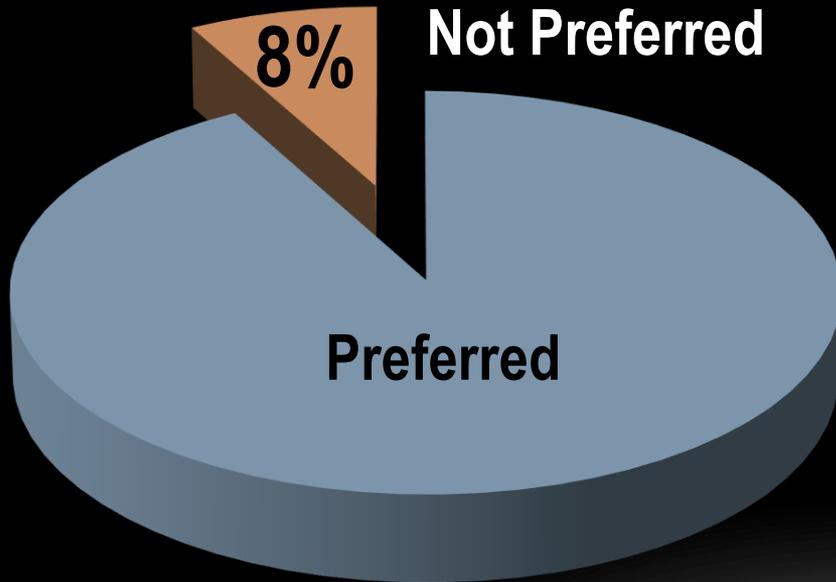
**69% Parents**

**72% Children**

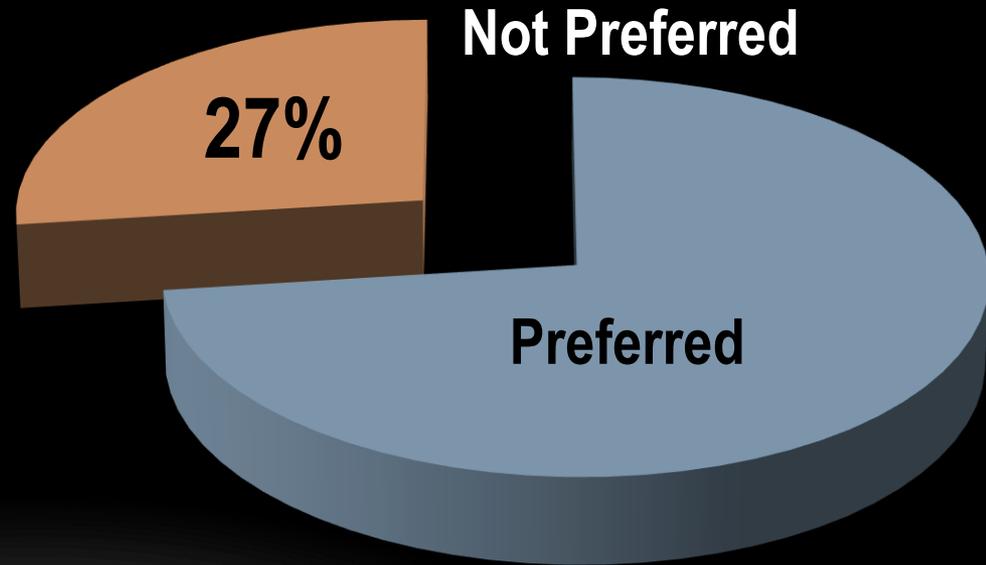


# BASELINE TASTE PREFERENCE RESULTS

## Hard White



## Hard Red



# TASTE PREFERENCE RESULTS

Consumed more hard white (3.7 grams)  
than hard red (3.3 grams)

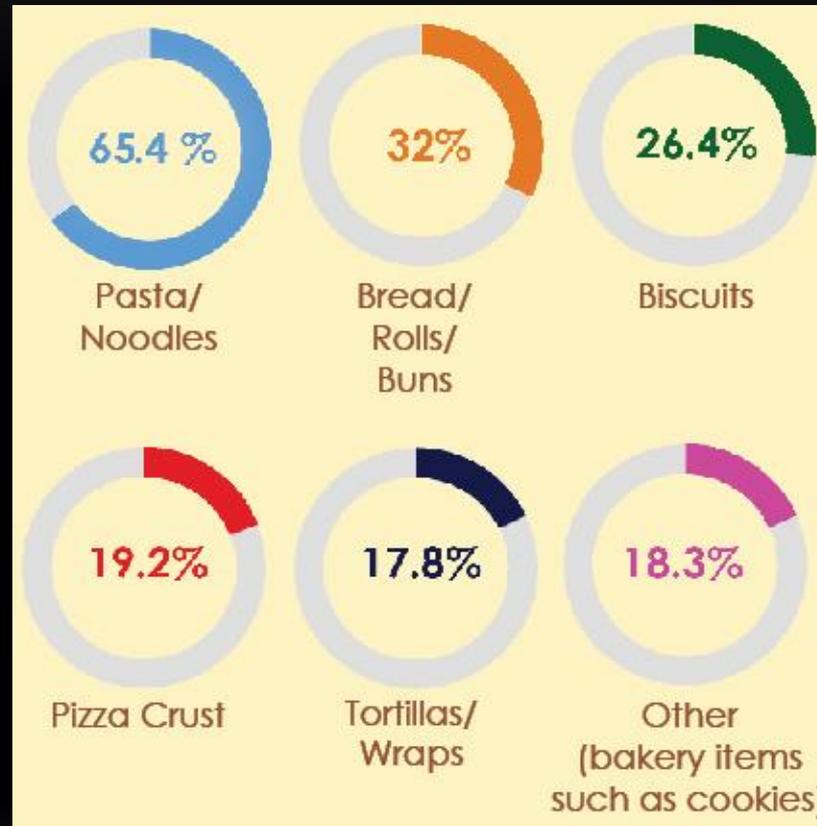


# CURRENT WORK:

- Education Health Professionals on Wheat & Whole Grains
- Develop Educational Materials
  - Preschoolers
  - School Aged
  - Food Service Professionals
  - Registered Dietitians



# WHY DO PROFESSIONALS NEED TO KNOW AND WHAT PRODUCTS NEED “HELP”



# WHY SCHOOLS NEED EDUCATION



- 2015 School Nutrition Association Nutrition Trends Survey
  - 73% reported meeting the whole grain rich requirement a “challenge” or “significant challenge”
  - 94% of those cite **lack of student acceptance**
  - 54% higher cost
  - 42% lack of product availability
  - 31% recipe functionality



# RESEARCH SUCCESS:

- ✓ Support Idaho Wheat Production
- ✓ Evidence for Hard White Wheat Preference
- ✓ Possibility to increase Whole Grain consumption





**THANK YOU  
IDAHO WHEAT COMMISSION!**

**Questions?**

Birch, L.L., McPhee, L., Shoba, B.C., Pirok, E., & Steinberg, L. (1987). What kind of exposure reduces children's food neophobia? Looking vs. Tasting. *Appetite*, 9, 171-178.

Horne, P.J., Greenhalgh, J., Erjavec, M., Lowe, C.F., Viktor, S., & Whitaker, C.J. (2011). Increasing pre-school children's consumption of fruits and vegetables. A modeling and rewards intervention. *Appetite*, 56, 375-385.

Poelman, A.A.M., & Delahunty, C.M. (2011). The effect of preparation method and typicality of colour on children's acceptance for vegetables. *Food Quality and Preference*, 22, 355-364.

Steiner, J.E. (1979). Facial expressions of the neonate infant indicating the hedonics of food related stimuli. In J.M. Weiffenbach (Ed.), *Taste and Development: the genesis of sweet preference* (pp. 173-189). Washington DC: US Department of Health and Human Sciences.

Wardle, J., Cooke, J.J., Gibson, L., Sapochnik, M., Sheiham, A., & Lawson, M. (2003). Increasing children's acceptance of vegetables: A randomized trial of parent-led exposure. *Appetite*, 40, 155-162.

## REFERENCES