



U.S. Dairy
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Protein: Timing and Quantity

IFT 2013

July 13-16, Chicago





In Pursuit of Balance

- The majority of U.S. consumers (86%) say that healthy eating is very or somewhat important to them.¹
- Obesity in U.S. increasing:
 - 75% of adults are classified as overweight or obese
 - 32% of kids are at or above the 85th percentile of BMI-for-age weight.²
- Chronic conditions will affect 60% of the population
- Many lifestyles/diets are out of balance



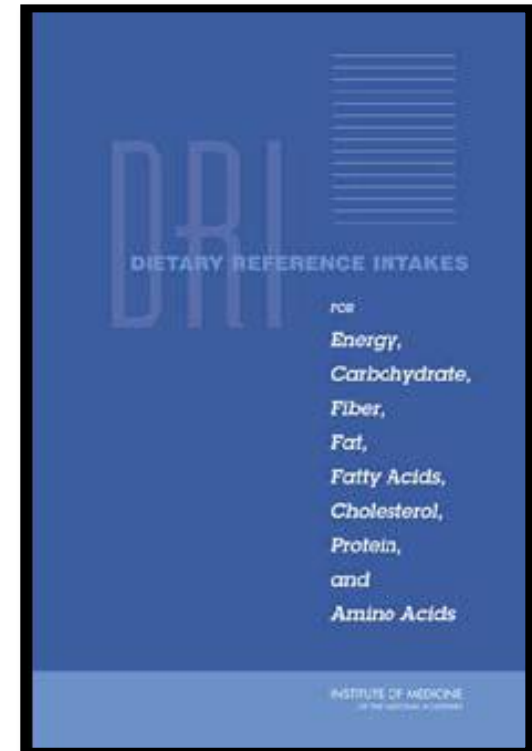
¹ Attitudes Towards Food: Weight and Diet - US - May 2009

² Data from National Health and Nutrition Examination Survey (NHANES)



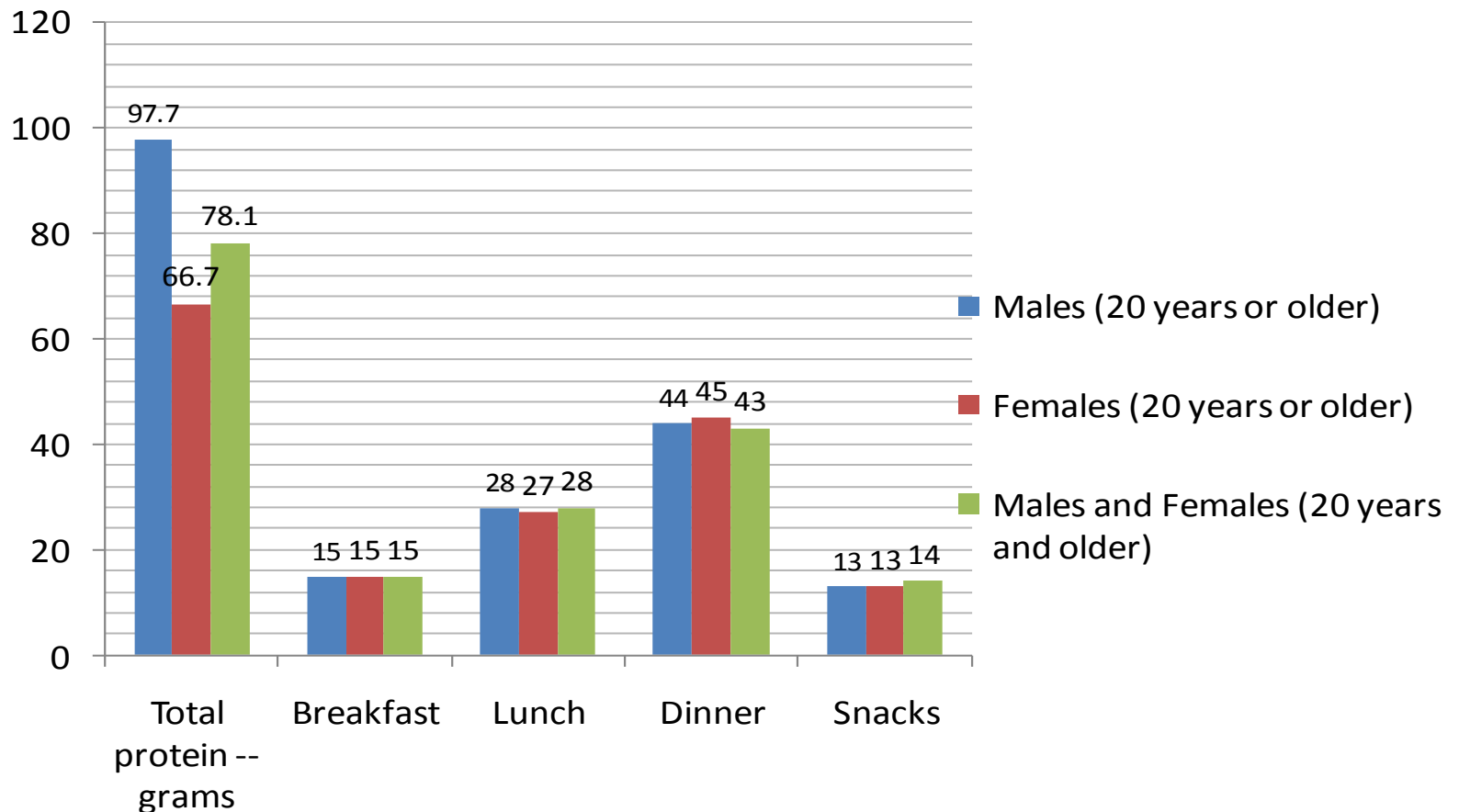
Protein Recommendations

- RDA: 0.8 g/kgs for adults
 - Preventing deficiencies vs. optimizing health
- Acceptable Macronutrient Distribution Range (AMDR): 10-35% total calories
- Range of 55 grams to 175 grams of protein/day for 150-pound person
- Higher end of range could benefit:
 - Weight conscious individuals
 - Active adults and athletes
 - Aging adults



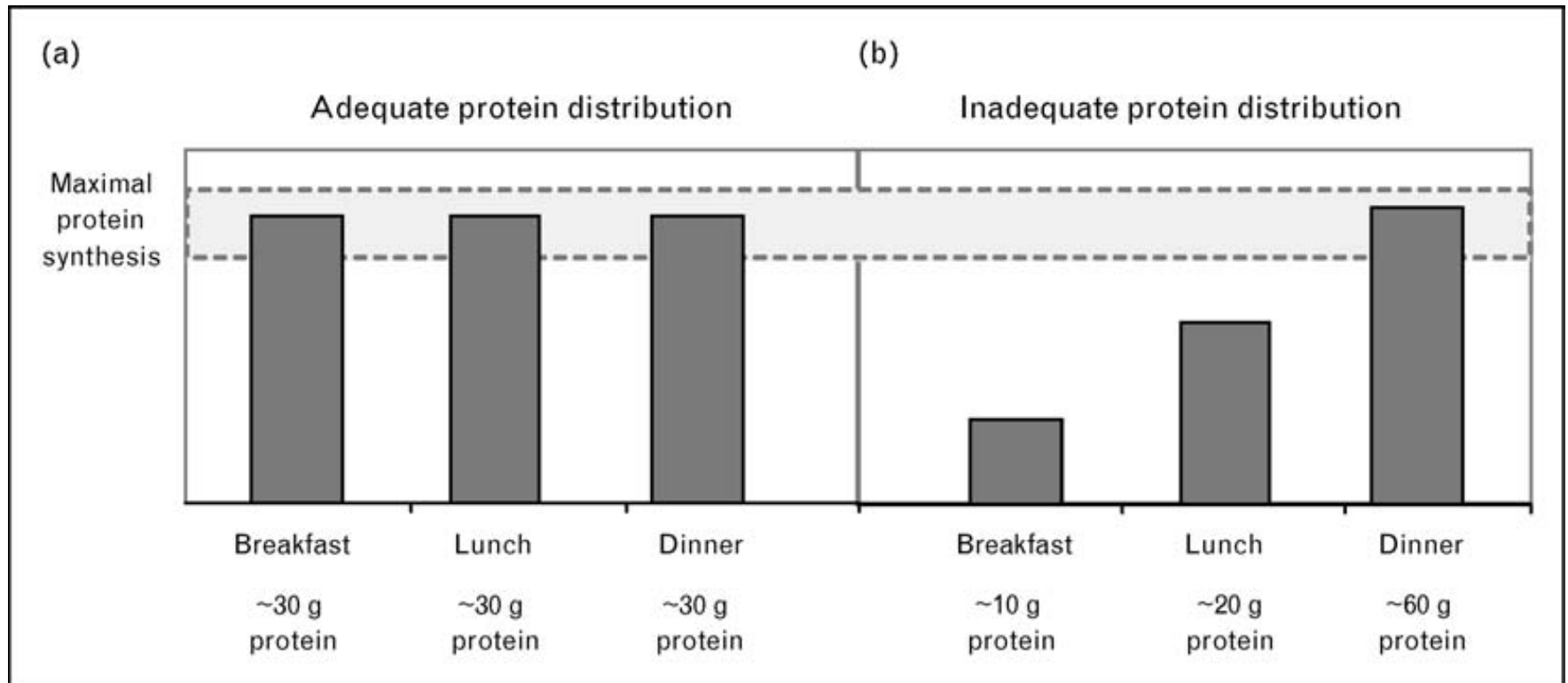


Patterns of U.S. Protein Intake





The Importance of Adequate Protein Throughout the Day



Paddon-Jones D and Rasmussen BB, *Curr Op in Clin Met Care*, 2009



Experts Suggest:

Spreading protein intake throughout the day may be most beneficial for protein synthesis

- Studies have shown muscle protein synthesis may be maximized by getting about 30 grams of protein at each meal¹.
- Consumers are looking for protein sources beyond traditional options².

1. Paddon-Jones D and Rasmussen B. Dietary protein recommendations and the prevention of sarcopenia. *Curr Opin Clin Nutr Metab Care*. 2009, 12:86–90 and Symons TB, Sheffield M, Wolfe RR, Paddon-Jones D. A moderate serving of high-quality protein maximally stimulates skeletal muscle protein synthesis in young and elderly subjects. *J Am Diet Assoc*. 2009; 109:1582-86.
2. DMI Emerging Diets Research, 2010

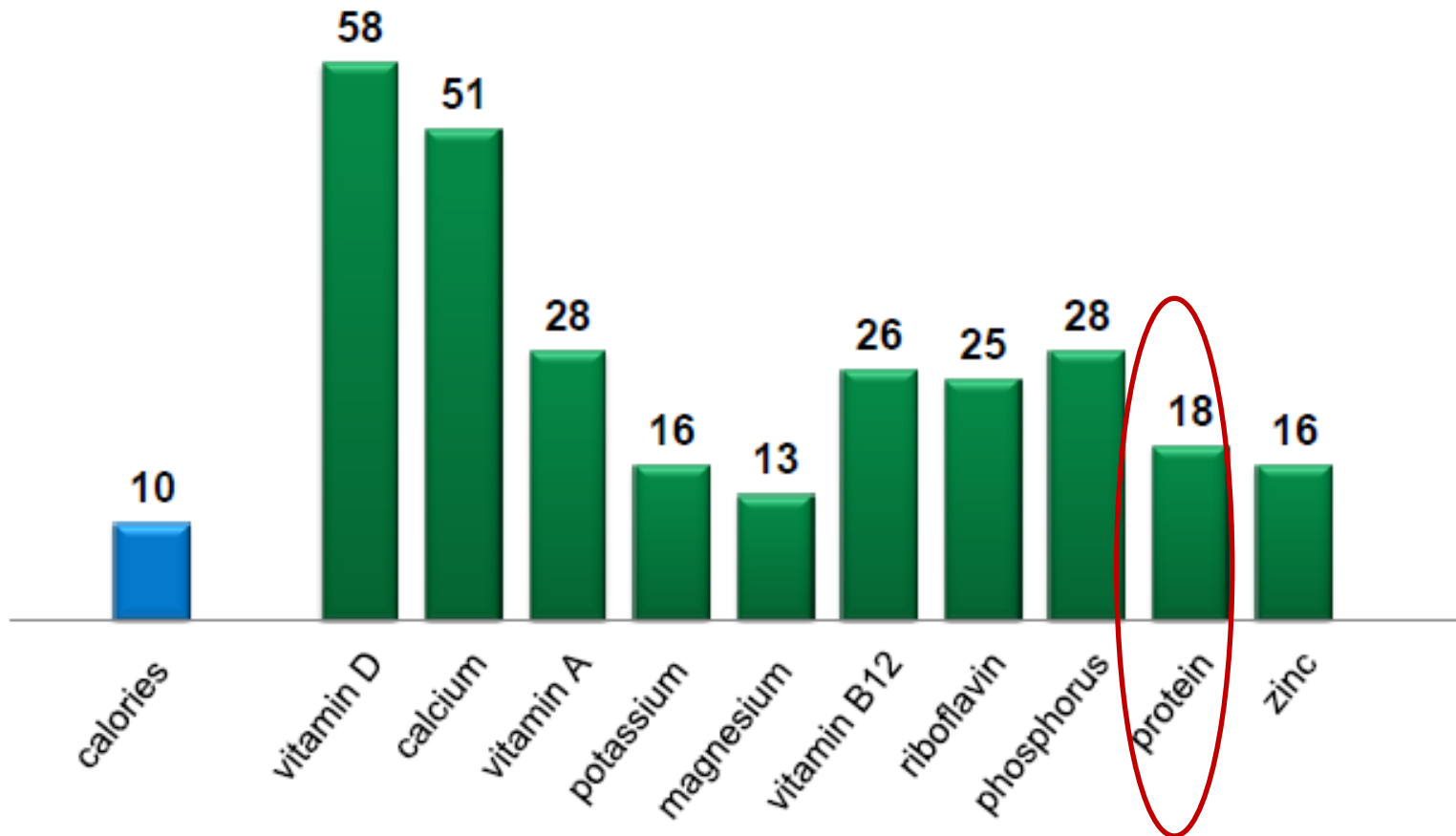


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Of all the foods people eat, dairy provides a significant portion of essential nutrients and only 10% of calories

Percent of calories & nutrients from dairy products





Consumer Insights

- 55% of U.S. consumers express interest in getting more protein in their diets¹.
- Nearly half (45%) of consumers look for foods and beverages with a short list of recognizable ingredients².
 - Minimally processed and short lists of ingredients are becoming desirable for consumers.
- Consumers are becoming more aware of and knowledgeable about the benefits of protein in the diet³.

1. IC Protein White Paper

2. NMI Aug 2011

3. DataMonitor Trends in Protein Intake, 2009



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Those Who Consume the Least Need it the Most

- Higher protein intake needed for muscle maintenance
- 25-30g needed at each meal occasion to support muscles
- Creates breakfast and snack opportunities!





Protein for Healthy Aging

Research suggests diets higher in protein can help maintain muscle during aging¹

- 70% of the adult population believes proper nutrition delays the onset of chronic disease⁴
- In community dwelling adults, those with higher protein intakes over a three year period lost 40% less lean mass than those with lower protein intake²
- It has been suggested that total protein intake for older persons should be slightly higher, such as a 1 to 1.5 g/kg/day range³

1. Healthy Aging Scientific Backgrounder

2. Houston AM J Clin Nutr 2008;87:150-5

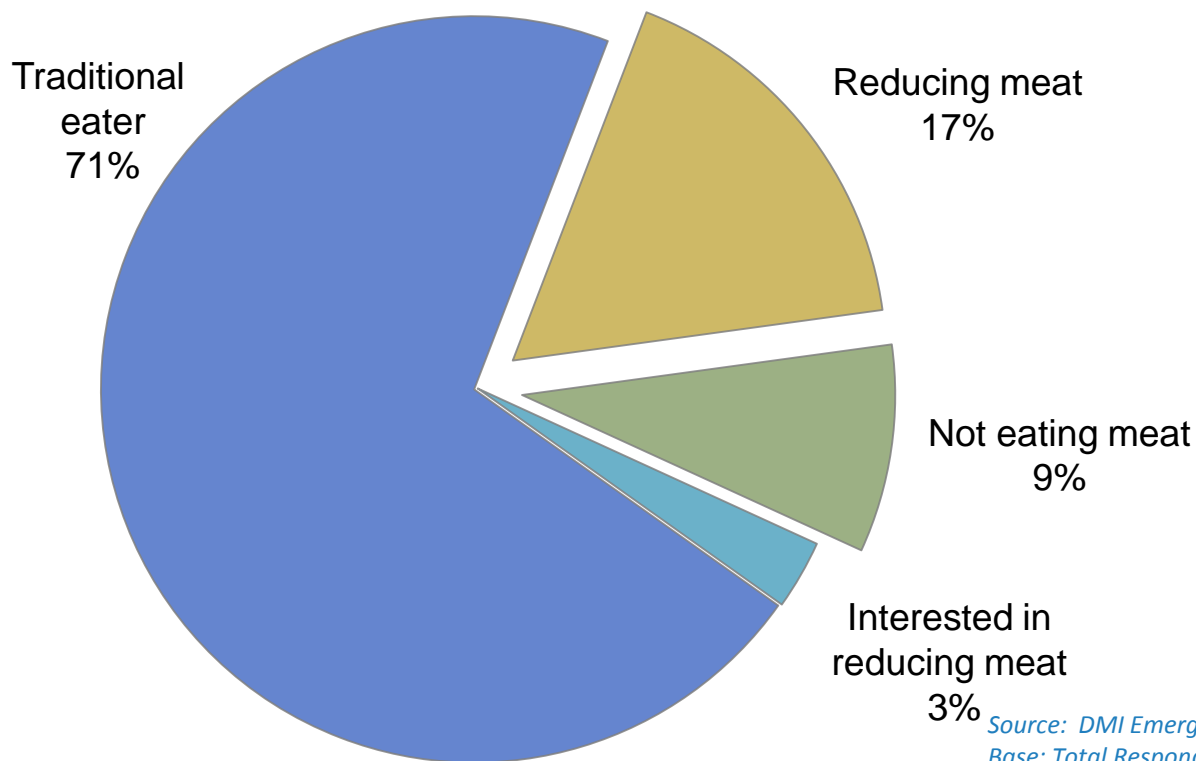
3. Gaffney-Stomberg, et al. Increasing dietary protein requirements in elderly people for optimal muscle and bone health. J Am Geriatr Soc. 2009;57:1073-1079.

4. Gfk Strategic Innovation, See USDEC Inputs 4-4-12



Over 25% of adults are reducing or not eating meat and looking for additional protein sources

Incidence of Eating Behaviors



Source: DMI Emerging Diets Research, 2010
Base: Total Respondents, adults, N=2007



Veggiemoo Dumpling with Reduced Sodium Soy Sauce Prototype

- 90% of Americans regularly choose ethnic foods at home or in restaurants.¹
- Smaller or half-portions for a smaller price are a top menu trend with 72% of chefs considering it a “hot trend.”²
- Prototype is *excellent* source of protein due to MPC in dough.
- Contains milk protein concentrate (dumpling) and whey permeate (sauce).



11g protein per 140g serving

1. IC White space 5 Global Taste Adventures Source: GfK Innovation, Gallup in A.E. Sloan, Food Technology June 2010
2. Packaged Facts, compiled with information from the National Restaurant Association



Other Protein-containing Prototypes



Protein Jerky Snack, 9g protein



Soft Protein Pretzel, 9g protein



Cafe Yogurt Frappe, 10g protein



Savor y Greek-style Yogurt, 22g protein



Additional Health Concerns-Sodium Reduction

Reduced Sodium Sauce



Sodium reduced from 270mg to 170mg per serving

- 34% of consumers are limiting their salt intake by switching to low-sodium products.¹
- Sodium consumption is not just a U.S. issue; there are at least 32 countries with sodium reduction initiatives.²
- In 2012, 53% of consumers tried to limit salt/sodium intake.³
- Sauce contains 37% less sodium than a similar sauce by using whey permeate and reduced sodium soy sauce.

1. Cheese and Sodium Snapshot: Fall 2011 IC for U.S. Dairy® Health & Wellness, Custom Sodium Survey, April 2010

2. Webster JL, Dunford EK, Hawkes C, Neal BC. Salt reduction initiatives around the world. J Hypertens. 2011;29(6):1043-1050.

3. IFIC 2012. 2012 food and health survey. International Food Information Council, Washington D.C. www.ific.org



What is Permeate?

- By-product of whey and milk protein manufacture
- Permeate Contains:
 - **Ash-mineral salts**
 - **Calcium phosphate, magnesium, sodium, potassium, etc.**
 - Non-protein nitrogen compounds
 - Urea, creatine, creatinine, uric acid, orotic acid, ammonia
 - Flavor potentiators
 - Lactose
- Benefits
 - **Label Declaration: Dairy Product Solids**
 - **Provides a consumer-friendly, simple label**
 - Offers sodium reduction alternative
 - Maintains flavour and texture



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