EVERY BITE COUNTS: DIETARY GUIDELINES ADVISORY COMMITTEE REPORT HIGHLIGHTS EGGS AS A FOOD THAT CAN HELP CLOSE NUTRIENT GAPS ACROSS THE LIFESPAN

by MICKEY RUBIN, PHD

This past July, the Dietary Guidelines Advisory Committee released their Scientific Report¹ which will serve to inform the development of the 2020-2025 Dietary Guidelines for Americans due out at the end of this year. The Committee examined the latest nutrition science using a life-stage approach, making dietary recommendations for Americans of all ages. Importantly, for the first time in the history of the Dietary Guidelines for Americans, these recommendations will include guidance for children from birth to 2 years of age.

Contained within the Scientific Report were several important conclusions regarding the role of eggs in healthy diets across the lifespan. The Committee highlighted science supporting eggs as a fundamental first food for infants and toddlers. Eggs provide several nutrients noted as important during this time of rapid

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brain development including high-quality protein, choline, and iodine. The Committee’s thorough review of the science recognized eggs’ role in providing these critical nutrients, including eggs in recommendations from the very moment infants are ready for solid foods.

Choline is under-consumed by most Americans, but the Committee noted that this poses special challenges for infants, toddlers, and pregnant women. A recent survey commissioned by ENC showed low levels of awareness of choline among both new and expecting mothers and the health professionals who care for them. Over 70% of these moms and over 40% of OBGYNs and pediatricians were unfamiliar with choline. With less than 10% of pregnant women meeting the Adequate Intake, this lack of knowledge represents a barrier to adequate choline consumption. Importantly, in our survey dietitians had almost 90% awareness of choline. Clearly, dietitians should play an important role in closing this knowledge gap.

Related, the Scientific Report highlighted iodine as a nutrient of public health concern for pregnant women and as a nutrient important for infant brain development. Eggs are an excellent source of iodine, containing 20% of the Daily Value. As an excellent source of both choline and iodine, new and expecting moms would benefit greatly from education on the importance of including eggs in their diets to achieve recommendations and support brain development.

The Scientific Report also recommended early introduction of eggs to reduce the risk of egg allergy. This conclusion aligns with previous recommendations from the American Academy of Pediatrics. Given older, contradictory guidance to avoid early introduction of allergens, it will be especially important to provide clear guidance and education on this new recommendation.

The Scientific Report recognized that eggs can help Americans meet nutrient needs at all ages and move towards achieving healthier diet patterns. In children, the Committee identified the diet quality benefits if energy were to be redistributed from added sugars to the Protein Foods group – highlighting eggs as a preferred nutrient-dense option. In pre-teens and adolescents – particularly girls – eggs were encouraged for their protein and choline content. Older adults were noted for poor nutritional status related to protein and vitamin B12, two nutrients for which eggs provide greater than 10% of the Daily Value. Eggs also were identified as one of the few natural food sources of vitamin D, a nutrient of public health concern for all Americans.

The Dietary Guidelines Advisory Committee Scientific Report represents a tremendous step forward in our understanding of the science on healthy eating. We look forward to the release of the Dietary Guidelines later this year which will provide the latest information to nutrition and health professionals about how to build healthy diets and how eggs, as a nutrient-dense food, contribute to health and wellbeing at every age and life stage in a variety of ways.

REFERENCES

Every Bite Counts: Nutrition During Pregnancy and Birth to 24 Months
Date: December 8 at 2 pm ET
Speakers: Elizabeth Shaw, MS, RDN, CPT, Registered Dietitian @Shaw’s Simple Swaps and Mickey Rubin, PhD, Executive Director @Egg Nutrition Center

The recent Dietary Guidelines Advisory Committee Scientific Report includes, for the first time, dietary guidance for women who are pregnant and infants and toddlers from birth to 24 months of age, highlighting the importance of optimal nutrition during these life stages. Health professionals play a critical role in educating expectant mothers and the parents, guardians, and caregivers that help shape dietary intake during the first few years of life. This webinar will equip health professionals with clear and practical guidance for educating these groups on the latest research and key dietary recommendations from the Scientific Report.

Looking for new recipes and resources? Visit IncredibleEgg.org/nutrition/nutrition-education-materials/ for new recipes and food allergy handouts, including a health practitioner’s guide and parent version available in both English and Spanish.
FOOD ALLERGEN INTRODUCTION TO INFANTS, DGAS: BOTH EVOLVE WITH SCIENCE

by SHERRY COLEMAN COLLINS, MS, RDN, LD

KEY MESSAGES

- Evidence supports the early introduction of infant-safe peanut foods and eggs starting as early as 4 to 6 months of age to reduce the risk of allergies to these foods. “Early and often” is the mantra for when to feed babies potential allergens.
- Infants with severe eczema or an existing food allergy are considered at risk for developing food allergies and the introduction of potential allergens should first be discussed with a healthcare provider.

For those of us who monitor research for evidence-based clinical practice, changes in recommendations are inevitable. As any area of health and nutrition is researched, experts evolve their practice as new things are learned. Yet, every time there are big changes in clinical guidelines, it takes time for those changes to become the standard of care. For the latest recommendations on early feeding of potentially allergenic foods, this is certainly the case. To understand the latest recommendations for feeding peanut foods as early as 4 to 6 months and egg and other allergens within the first year, we need to understand how we got here.

In the late 1990s, pediatricians and researchers noticed a troubling increase in the rates of food allergies in children. Because of this increase, experts including the American Academy of Pediatrics (AAP) recommended withholding potential allergens from high-risk infants for one, two or three years in guidance released in 2000. However, in 2008, these recommendations were rescinded because the evidence did not support withholding as a means to prevent food allergies. Meanwhile, researchers began trying to unravel the mystery of how early diet may influence the development, or protect against, food allergy development. Here are some of the groundbreaking studies that have shaped current guidelines.

- In 2008, Du Toit, et al. reported that Jewish children in the United Kingdom who did not eat peanut foods in the first year had a 10-fold higher rate of peanut allergy than those in Israel, whose mothers fed them high quantities of a peanut-containing weaning food.
- In 2015, the Learning Early About Peanut (LEAP) allergies trial included 640 infants at high risk for peanut allergies (severe eczema and/or egg allergy), half of whom ate peanut foods early (starting between 4 to 11 months) and half of whom did not. At the end of 5 years, researchers found that those infants who started early had up to an 86% reduced risk of developing a peanut allergy.

To learn more about food allergies and earn CEUs visit PreventPeanutAllergies.org/Pediatrician-Resources to access the webinar: Leaping Past Food Allergies - How and When to Introduce Potential Allergens
• In 2016, the Enquiring About Tolerance (EAT) study released results from 1,303 breastfed infants who either began to eat six commonly allergenic foods (peanut, egg, cow’s milk, sesame, whitefish, and wheat) starting at 3 months of age or introduced these foods according to standard recommendations. The EAT study proved that introducing potential allergens early was safe, but participants had trouble incorporating all of the allergenic foods in the full quantities. Those who did adhere to the protocol had lower rates of any food allergy.

• In the PETIT study published in 2017, a randomized controlled trial where 147 high-risk infants (with severe eczema) were randomized to eat heated egg powder in a two-step introduction. The results showed that early introduction of baked egg protein reduces the risk of egg allergy in participants and the study was stopped early because of such significant results.

• In 2020, the CHILD study, which followed 2,669 children from birth to 3 years, showed that delaying introduction of peanut, egg, or milk past 12 months resulted in a significant increase in the risk for developing allergies to these foods.

Following the release of the LEAP study, an international consensus was published about the early introduction of peanut foods. This consensus was followed by clinical guidelines published by the National Institutes of Allergy and Infectious Disease recommending the introduction of peanut foods as early as 4 to 6 months, based on infant risk. In 2019, the AAP released revised recommendations to include the latest advice for introducing peanuts and other allergens.

Finally, the 2020 US Dietary Guidelines for Americans Advisory

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<td>79% reduction in risk for developing egg allergy by 3 years old</td>
<td>7x increase in peanut sensitization and possible or probably peanut allergy if not introduced to peanut by 18 months; early introduction of peanut, egg, &amp; milk reduced risk of allergies</td>
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<td>Parent-reported data is subject to errors; oral food challenges were not done</td>
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<td>Potential bias; poor adherence to study protocol</td>
<td>High-risk infants only</td>
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TRANSITIONING TO FAMILY MEALS: NUTRIENT-DENSE FOODS FOR INFANTS AND TODDLERS

by JEN HOUCHINS, PHD

KEY MESSAGES

• The 2020 DGAC says “every bite counts” when it comes to feeding infants and toddlers because it is a critical period for growth and development that is characterized by high nutrient needs in relation to the amount of food consumed.

• The DGAC emphasizes offering developmentally appropriate forms of nutrient-rich animal-sourced foods, including meat, poultry, seafood, eggs and dairy products, as well as nut and seed containing foods, fruits, vegetables, and grain products in age-appropriate forms.

While children develop at different rates and individual circumstances can influence feeding needs, the 2020 Dietary Guidelines Advisory Committee summarizes, “A general principle is to view the period from ages 6 to 24 months as a continuous transition from diets appropriate for infants to diets that resemble family food patterns.”

6 to 12 Months: Provide Complementary Foods with High Nutrient Density

During the first year of life, human milk or infant formula contribute a substantial proportion of total energy. When an infant is developmentally ready (around 4 to 6 months), complementary foods can be introduced. The 2020 DGAC recommends:

• “...consumption of meat, egg, and seafood is an important strategy” for providing key nutrients such as iron, zinc, choline, and long-chain polyunsaturated fatty acids.

• “Fortified infant cereals can contribute a substantial amount of some of these nutrients, particularly iron and zinc...”

• “...fruits and vegetables...rich in potassium, vitamin A, and vitamin C...not only to provide adequate nutrition but also to foster acceptance of these healthy foods.”

• “Introduction of peanut products and egg is advised...” to help reduce the risk of allergies to these foods and “to provide good sources of fatty acids and choline.”

• “...diets at this age include no remaining energy for added sugars and little energy for added oils or added solid fats.”

12 to 24 Months: Continue to Provide a Variety of Complementary Foods and Beverages with High Nutrient Density

In their analysis for 12 to 24 months, the 2020 DGAC started with the same proportions in the 1,000 kcal pattern for 2 years and older and then adjusted in order to meet nutrient needs for toddlers. Guidance was provided for caregivers:

• “Provide a variety of animal-source foods (meat, poultry, seafood, eggs, and dairy), fruits, and vegetables, nuts and seeds, and whole grain products, beginning at ages 6 to 12 months and continuing thereafter...”

• “For toddlers ages 12 to 24 months whose diets do not include meat, poultry, or seafood, provide eggs and dairy products on a regular basis, along with soy products and nuts or seeds, fruits, vegetables, grains and oils.”

• “Avoid foods and beverages with added sugars during the first 2 years of life.”
Overall, these carefully crafted guidelines emphasize “every bite counts” – that is, infants and toddlers are not able to eat large amounts of food, but require significant amounts of essential nutrients during this critical period for growth and development.

Importantly, the 2020 DGAC provided examples of what infants and toddlers should eat, and suggest research is needed to better understand how infants and toddlers should be fed. The Scientific Report states, “Establishing healthy eating habits during the first 2 years of life is critical. Although the individual experience shapes food preferences (e.g., tastes), the collective modeling of food choices in young childhood through direct observation of food intake by peers and adults also is paramount.” This statement is supported by research that indicates caregivers can play an important role in helping to shape children’s eating habits by providing healthy food in the home and by modeling eating behaviors. In other words, one of the best ways to help baby learn to eat healthy is by providing nutrient-rich options for the entire family!

REFERENCES
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