Nutrition and health are complex. The relationship between a given nutrient and chronic disease is not a simple single cause-single effect relationship. There is a complex system of mediating and modifying factors such as what combinations of nutrients are in the food or beverage, how the food is prepared, when and how the food is consumed, what the person’s health status is and what other risk factors the person may have for obesity and other medical conditions. Therefore, there is a need for more methods and approaches that can help us better understand this complex system.

Not fully understanding the systems that affect nutrition and health can make it challenging to come up with dietary guidance and recommendations that are adaptable enough for different people and situations. In fact, not using a systems approach can even result in unintended consequences.

{ CONTINUED on Page 4... }
5 GROUNDING FOODS FOR SUMMER

by JESSICA CORDING, MS, RD, CDN, INHC

KEY MESSAGES

- Meals and snacks rich in protein, carbs and healthy fats provide energy and help you feel well and grounded.
- Boost your energy and your mood with these foods: eggs, yogurt, avocado, oats and spinach.
- Bonus: these foods also nourish your digestive health and help support a strong immune system.

After months of little sunlight and low temperature, many of us are thankful that summer is finally here. A new season is a great time to evaluate your wellness routine, but it can also be overwhelming as we adjust to light and weather changes and navigate that push-pull feeling of wanting to dive into a new season while still having to tie up loose ends from the previous one. Packing our schedules with summer activities can also lead to feeling scattered and stressed.

We hear a lot about what not to eat, but how about focusing on what foods can help us feel well and stay grounded?

Maintaining good blood sugar control is key. Eating balanced meals and snacks throughout the day that provide a combination of protein, complex carbs and healthy fats helps ensure that those meals break down more slowly, as opposed to the crash-and-burn we get from empty carbs or super-restrictive regimens.

There are also certain nutrients in foods that can impact our body’s stress response and brain function to help support a better mood, which is essential for dealing effectively with stress. Because many mood-regulating neurotransmitters are produced in the gut, nourishing digestive health also helps support a stable mood and strong immune system.

Here are the foods I commonly recommend to help you feel more grounded.

**Eggs**

Eggs provide a satiating combination of protein and fat and include optimal amounts of the amino acid tryptophan, which is a precursor to mood-regulating neurotransmitter serotonin. While the whites contain roughly 60 percent of the egg’s protein, the yolks are where you’ll find most of the good stuff, like vitamins A, D and K, plus choline, an important nutrient for brain function. You’ll also find some cortisol-taming omega-3s in there, which have been studied for their impact on mood. Enjoy on toast, on a salad or on their own. Omelets and frittatas also make a great vehicle for seasonal vegetables.

**Yogurt**

The probiotic bacteria in yogurt help support immune function and clear communication between the gut and the brain. Yogurt is also a great source of protein. Go for unflavored varieties to save yourself the sugar, which can mess with your blood glucose levels and tack on excess calories that aren’t doing you favors. Enjoy with ground flax for additional fiber and plant-based omega-3s.
Oats
Working some slow-burning complex carbohydrates like oats into your day supports efficient production of serotonin. Oats also include optimal amounts of tryptophan. What’s more, the fiber in oats promotes regular digestion, and certain fibers in oats (“prebiotics”) even serve as food for probiotic bacteria. Start your day with oats topped with seasonal fruit like strawberries or apricots, and nuts or nut butter to add protein and “good” fats. Another delicious idea is to cook an egg into oats - once you try it you’ll never go back.

Spinach
Leafy greens like spinach are rich in folate, a B-vitamin that’s key for efficient production of the feel-good brain chemical dopamine. Enjoy a big spinach salad or add spinach to smoothies, soups, pasta and grain dishes, and eggs. Some other greens to try are kale, arugula, chard and dandelion greens.

Avocado
Avocados offer up a delicious combination of “good” monounsaturated fats, plus filling fiber. Enjoy in a salad, with eggs, on top of a grain bowl or even eaten right from the skin with a spoon.

Jessica Cording, MS, RD, CDN, INHC is a registered dietitian, health coach, and writer with a passion for helping people streamline their wellness routine and establish a balanced relationship with food and exercise. Through her writing, consulting, public speaking, and counseling, she works with individuals, corporations, and the media to help make drama-free healthy living approachable and enjoyable.

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4. US DHHS NIH. Choline Fact Sheet for Health Professionals.

INTRODUCING MICKEY RUBIN, PhD – ENC’S NEW EXECUTIVE DIRECTOR!
I am excited to join the Egg Nutrition Center as the new Executive Director. Prior to ENC, I spent almost eight years as Vice President of Nutrition Research at National Dairy Council, and it is only appropriate that I work at ENC now because my two favorite foods are cheese and eggs!

I am passionate about nutrition science and how the foods we eat impact health, and while nutrition science has taught us a great deal over the years there is still much more to learn. That is why working at a place like ENC is so great, because eggs are an example of how we have come full circle in our understanding about food.

For example, eggs used to be considered bad for heart health, but not only has research demonstrated that this is not the concern it once was, we now are learning about all the potential benefits eggs can provide, such as providing a unique nutrient package that includes choline and lutein to support cognitive development.

I look forward to continuing all the great work that was done before I arrived while charting new ground and learning new things about eggs!
For example, the 1990 and 1995 Dietary Guidelines for Americans emphasized the dangers of diets high in saturated fat and cholesterol. This then led to many new products advertised as being low in fat and cholesterol hitting the market. However, low in fat and cholesterol does not necessarily mean healthy. A number of low-fat products were also subsequently higher in sugar, salt, artificial ingredients and refined carbohydrates. Obesity, overweight and chronic disease rates rose throughout the popularity of low fat products in the 90’s. Viewpoints on eggs changed over time as well. For example, the 1977 Dietary Goals for the United States report recommended that Americans eat less eggs as a low-fat diet was needed to prevent the two leading causes of death, coronary heart disease and cancer.\(^\text{1}\) Now, evidence supports that whole eggs can be part of a heart-healthy diet. Eating eggs has been shown to change the size and shape of “bad” cholesterol and increase “good” cholesterol levels – markers of heart disease risk.\(^\text{2}\)

A National Academies of Medicine report recommends integrating systems approaches and methods into the Dietary Guidelines for Americans (DGA) 2020

The National Academies of Science convened a committee to come up with recommendations on how the DGA process should be adjusted. One of the recommendations in the Redesigning the Process for Establishing the Dietary Guidelines for Americans was to use a comprehensive and coordinated systems approach in order to promote health and prevent chronic diseases. The report also indicated that modeling in general can be helpful in examining complex systems, and the food pattern modeling conducted by the United States Department of Agriculture has tremendous potential for showing the simultaneous effects of altering food intake patterns.\(^\text{3}\)

The Global Obesity Prevention Center (GOPC) at Johns Hopkins University
There is now more data, technologies and analysis capabilities than in previous decades to help researchers and health professionals better understand and address the complex systems that affect nutrition and health.\(^\text{4}\)
Computational simulation models can help overcome potential challenges by serving as virtual laboratories to better understand and explore the impact of a policy or intervention before real-world implementation. The GOPC has been working with decision makers to develop and utilize computational simulation models to design and test different potential interventions and policies, which in turn could save considerable time, effort and resources.

Examples include the GOPC’s VPOP (Virtual Populations for Obesity Prevention) simulation models of cities such as Baltimore, New Orleans, Philadelphia, San Francisco and Washington D.C. Each model includes geospatially-explicit virtual representations of people and relevant locations (e.g., households, schools, physical activity sites such as gyms, parks and recreation centers and food sources such as grocery stores, fast food restaurants, corner stores and sit-down restaurants). In the virtual communities, people go about their routine daily activities and make decisions that affect their diet and physical activity levels. Each virtual person has an embedded metabolic model. The virtual residents, like real people, can gain and lose weight depending on how many calories they consume and expend (Think SimCity.).

The VPOP models have helped determine the economic and health impact of increasing US youth physical activity levels and better understand how the implementation of sugar-sweetened beverage warning labels can impact obesity prevalence.

Given the complexity of nutrition, it’s key that a unified, strategic, systems approach that incorporates all the multilevel, multifaceted factors come into play to better understand and improve health.

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Plant or animal protein: does it matter in bone health? New research shines a light on the importance of protein in promoting calcium absorption.

Read more here: eggnutritioncenter.org/BoneHealth

Figure 1: The global obesity graphic was designed by the GOPC to demonstrate the interconnected, complex network of factors that make-up the epidemic.
Most of the academic research done in developing countries has the unfortunate tendency of not being adopted and applied. After reading the ENC article, “Eggs for the Nutritionally Vulnerable,” we at Trustlines Development Network launched a chicken and eggs project in rural Uganda. The article cited a study by the University of Arkansas carried out in Uganda, my country of birth. The research found that adding two eggs a day to the diets of 6 to 8-year-old children in undernourished areas of rural Uganda resulted in increased height and weight.

Another study by Washington University in St. Louis showed that feeding one egg a day (versus none) to 6 to 9-month-old infants in undernourished areas of Ecuador decreased the prevalence of stunting.

As a registered dietitian, I know the nutritional benefits of eggs. But the assertion in the article, that egg farms can operate in rural environments and provide a low cost and sustainable source of eggs to impoverished communities, motivated and reinforced our work in rural Uganda for families to raise chickens for eggs at the subsistence level. We dubbed the program “Raising a Village - One Egg at a Time.”

We wanted a chance to implement what we knew to be true, so, I contacted ENC. Tia Rains, ENC’s previous Executive Director, recommended the International Egg Foundation (IEF) which donated $500 to purchase the chickens and eggs for nutritionally-vulnerable children in rural Uganda.

We met many children, but Kevin and Slivia, stood out. Both children were displaced when their mothers died and face food insecurity issues. Kevin, 10, was left at his grandma’s doorstep at 3 months old. His father has health problems and cannot take care of Kevin.

Slivia wakes up early to make breakfast, wash dishes, clean the house, prepare lunch and supper before getting to school by 7 am. After school, she weeds the garden, fetches water from the well, collects firewood, and does chores for neighbors to earn her school fees and supplies. This list of chores is overwhelming even for an adult. Slivia, only 9, has been with her grandmother since 2 ½ years-old. The grandmother, now in her 80’s, is disabled and Slivia is responsible for taking care of her.

Are all eggs created equally? Despite the color of the shell, housing conditions and feeds, all eggs are super nutritious. Learn more about the mineral content and which of these factors has the greatest impact.

Read more here: eggnutritioncenter.org/MineralsinEggs
Slivia beamed with joy and pride as she told us the chicken we gave her laid 12 eggs in 2 weeks. Kevin was thrilled at the idea of eating eggs anytime. Our experience in rural Uganda confirms that egg production can thrive in impoverished rural communities, be achieved at minimal cost, and is sustainable. To ensure the sustainability of the project, we earmarked the chickens and eggs as belonging to children, not the adults who might eat the chicken for dinner.

A total of 46 chickens were given to 23 families. Many more children wanted to get chickens, but we didn’t have enough for everybody. We can do more. We strive to make a meaningful and sustainable community impact. Our organization, Trustlines Development Network, Inc., helps children

One project at a time
One family at a time
One child at a time
One step at a time
and
One egg at a time

For more information visit www.trustlines.org

Edith Mubanda, RD is a retired public health nutrition educator who now dedicates her time educating children in Uganda, her native homeland, with hands-on sustainable self-development projects under the Trustlines Development Network.

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UPCOMING EVENTS

Better Breakfast Month
September is Better Breakfast Month!
Visit EggNutritionCenter.org for some
delicious breakfast recipes featuring eggs.

Food & Nutrition Conference & Expo
Academy of Nutrition and Dietetics
Chicago, IL { OCTOBER 20–24 }

is a quarterly publication produced by the Egg Nutrition Center (ENC) that
presents up-to-date reviews, summaries and commentaries on nutrition for health
promotion and disease prevention, including the role of eggs as part of a nutritious
and healthful diet. ENC accepts article submissions from health professionals. Opinions expressed by the
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