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The 2015-2020 DIETARY GUIDELINES

**Patricia A. Rouen, PhD, FNP-BC,
and Brenna R. Wallace**

Overview and Implications for Nursing Practice

This article reviews the 2015-2020 Dietary Guidelines for Americans released in 2016. Key recommendations are summarized and significant changes in the guidelines are highlighted. Implications for nursing practice to promote nutrition health are identified and resources to support implementation are included.

A nutritious diet plays a foundational role in health promotion and disease prevention. Adequate nutrition is essential for human growth and development, reproduction, recovery from illness, ongoing health maintenance, and quality of life (Slawson, Fitzgerald, & Morgan, 2013; Public Health Reports, 1983, p. 132). Alterations in nutrition may develop as a consequence of clinical disease, dietary intake of nonnutritive foods, or situational factors such as food insecurity and disparity that limit access to food sources. Although robust data have demonstrated the relationship between unhealthy diets and elevated rates of obesity, cardiovascular disease (CVD), diabetes, and cancer (Cahill et al., 2014; Centers for Disease Control and Prevention [CDC], 2016; George et al., 2014), a growing body of evidence has also documented that healthy eating patterns support wellness and reduce chronic disease (Bazzano et al., 2014; Estruch et al., 2013; Reedy et al., 2014).

The high prevalence of obesity in the United States, where 45% of all adults (Fryar et al., 2016a) and approximately 18% of youths ages 2 to 19 years are affected (Fryar et al., 2016b), has prompted national initiatives to promote nutritional health. Healthy People 2020 (www.healthypeople.org) includes goals to decrease the numbers of obese adults and children and to increase the proportion of primary care office visits that include education related to nutrition and weight. The National Health and Nutrition Examination Survey (NHANES) annually reports the dietary patterns and chronic disease prevalence among Americans of all ages and cultures (CDC, 2014). With the implementation of the Patient Pro-

tection and Affordable Care Act (2010) that emphasizes preventive care and the Medicare Chronic Care Management model (Centers for Medicare & Medicaid Services, 2015) which funds monthly health-promoting care for those with chronic diseases, the healthcare system now provides stronger support to address nutrition issues.

Lastly, the U.S. Department of Health and Human Services (HHS) and U.S. Department of Agriculture (USDA) publish a report every 5 years that provides evidence-based dietary guidelines. These guidelines inform health policy and program development, and provide recommendations for nutrition interventions. The eighth edition of the Dietary Guidelines for Americans: 2015-2020 (HHS & USDA, 2015) was released in January 2016. The purpose of this article is to present an overview of the guideline recommendations and their implications for nursing practice.

Nursing and Nutrition

Nursing's interest in nutrition dates back to Florence Nightingale who emphasized the importance of food to prevent illness and promote healing. On the topic of nutrition, Nightingale advised nurses to "have a rule of thought about

your patient's diet; consider, remember how much he has had and how much he ought to have today" (Nightingale, 1969, p. 68). With a holistic approach that emphasizes health promotion and person-centered care (American Nurses Association, 2010; Ekman et al., 2011), nurses are well-positioned to contribute to the nutritional status of the clients they serve. Nurses conduct assessments of physical and mental health, functional status, daily habits, and dietary patterns to identify nutritional



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The Healthy U.S.-style eating pattern encourages Americans to eat more fruits and vegetables from all groups and colors, use low-fat or fat-free dairy products and include grains, at least half of which should be whole grains.

concerns (DiMaria-Ghalili et al., 2016; Reed, 2014). In collaboration with healthcare providers, nurses provide nutrition education, mobilize resources to support food security, monitor dietary plans, and evaluate patient outcomes to ensure optimal health for their patients (DiMaria-Ghalili et al.; Reed).

The 2015-2020 Dietary Guidelines

The 2015-2020 guidelines emphasize healthy eating as one of the most powerful tools to reduce obesity and chronic disease. Previous guidelines concentrated on individual nutrients and food groups, but the new recommendations emphasize overall eating patterns that accommodate personal and cultural preferences (HHS & USDA, 2015). The document addresses five major guidelines: 1) follow a healthy eating pattern across the lifespan, 2) focus on variety, nutrient density, and amount, 3) limit calories from added sugars and saturated fats and reduce sodium intake, 4) shift to healthier food and beverage choices, and 5) support healthy eating patterns for all (HHS & USDA).

Guideline 1: Follow a Healthy Eating Pattern Across the Lifespan

An eating pattern is “the combination of foods and beverages that constitute an individual’s complete dietary intake over time” (HHS & USDA, 2015,

p. 12). An eating pattern should include calories to provide adequate nutrition for a healthy body weight and varies by individuals. Three eating patterns are presented as exemplars: “1) the Healthy-U.S. style, 2) the Healthy-Mediterranean style and 3) the Healthy-Vegetarian style” (Health Policy Brief, 2016, p. 3). The Healthy U.S.-style eating pattern encourages Americans to eat more fruits and vegetables from all groups and colors, use low-fat or fat-free dairy products and include grains, at least half of which should be whole grains (HHS & USDA, p. 15). Oils from plant sources and natural oils in foods such as nuts, seeds, and seafood are recommended. Protein options include seafood, lean meats, poultry, eggs, legumes, nuts, seeds, and soy products (HHS & USDA, p. 15). In addition to diet, regular physical activity is recommended.

Table 1 presents the food group components of the three healthy eating patterns using a 2,000-calorie plan (HHS & USDA, 2015). Both the Mediterranean- and vegetarian-style eating patterns are similar to the U.S.-style pattern with few differences. For all three plans, the recommendations for vegetables and oils are the same. Compared to the U.S. style, the Mediterranean diet permits a half cup more fruit, reduces the dairy intake by one cup, and adds an ounce to the protein choices with seafood preferred. The vegetarian pattern increases the intake of total and whole grains and provides specific weekly amounts for proteins such as eggs, legumes, nuts, seeds, and soy products.

Guideline 2: Focus on Variety, Nutrient Density, and Amount

This recommendation emphasizes that “nutritional needs should be met primarily from food” (HHS & USDA, 2015, p. 36). Nutrient-dense foods and beverages are those items that provide a lot of nutrients (vitamins, minerals, fiber) with relatively few calories. Nutrient-dense choices should have no added sugars or solid fats, few refined starches, and little sodium (HHS & USDA, p. 12). Nutrient-dense choices are available across all food groups. All fruits, vegetables, whole grains, seafood, eggs, legumes, unsalted nuts and seeds, low-fat and fat-free dairy products, and lean meats and poultry are considered nutrient-dense foods (HHS & USDA, p. 12).

Fruits and vegetables can be fresh, frozen, canned, or dried in cooked or raw forms. Fruits and vegetables are rich sources of fiber, vitamins, and minerals (e.g., potassium, iron, or choline). Fruits are best eaten whole and not juiced or

dried, as sugar and calorie amounts are higher, necessitating smaller servings. When selecting canned products, vegetable choices should be low sodium or rinsed before cooking to remove salt; canned fruits should have low sugar amounts or no added sugars. Whole grains are preferred. If refined grains are chosen, they should have limited sugar and be enriched with vitamins and minerals. Low-fat or fat-free dairy products provide calcium and protein.

Protein choices include animal or plant sources; both provide complimentary nutrients. For example, meats, poultry, and seafood provide heme iron, whereas plant-based proteins such as nuts and legumes have nonheme iron. Eggs are a complete protein and a source of iron. Seafood is a healthy protein and rich source of polyunsaturated fatty acids that improve cholesterol and reduce inflammation (Estruch et al., 2013; Yates et al., 2014); yet, the average American weekly fish intake is 5.5 ounces (Jahns et al., 2014). The 2015 guidelines recommend *at least eight ounces of seafood per week*.

Eating patterns with less meats and few processed meats or poultry reduce CVD, obesity, diabetes, and cancer risk (McEvoy et al., 2012). For adults, 26 ounces weekly of meats, poultry, and eggs is recommended. Processed meats may be included in diets but require attention to the amounts of sodium, saturated fats, and added sugars in these products (HHS & USDA, 2015, p. 25). As data show the meat consumption of teenage boys and men exceeds 26 ounces, *the current dietary guideline cautions men and teenage boys to eat less meat*.

Guideline 3: Limit Calories From Added Sugars and Saturated Fats and Reduce Sodium Intake

As strong evidence demonstrates diets high in saturated fat incur CVD risk, less than 10% of calories per day should come from saturated fat. Saturated fat is naturally made in humans to support physiologic functions and consumption of saturated fat is not necessary (HHS & USDA, 2015). Trans fat is

Table 1. Comparison of the Recommended Healthy Eating Patterns Using 2,000 Calories

	U.S.-Style	Mediterranean	Vegetarian
Food Groups	Amounts	Amounts	Amounts
Vegetables	2½ c-eq/day	2½ c-eq/day	2½ c-eq/day
Dark green	1½ c-eq/wk	1½ c-eq/wk	1½ c-eq/wk
Red & orange	5½ c-eq/wk	5½ c-eq/wk	5½ c-eq/wk
Legumes (beans, peas)	1½ c-eq/wk	1½ c-eq/wk	1½ c-eq/wk
Starchy	5 c-eq/wk	5 c-eq/wk	5 c-eq/wk
Other	4 c-eq/wk	4 c-eq/wk	4 c-eq/wk
Fruits	2 c-eq/day	2½ c-eq/day	2 c-eq/day
Grains	6 oz-eq/day	6 oz-eq/day	6½ oz-eq/day
Whole grains	≥ 3 oz-eq/day	≥ 3 oz-eq/day	≥ 3½ oz-eq/day
Refined grains	≤ 3 oz-eq/day	≤ 3 oz-eq/day	≤ 3 oz-eq/day
Dairy	3 c-eq/day	2 c-eq/day	3 c-eq/day
Protein Foods	5½ oz-eq/day	6½ oz-eq/day	3½ oz-eq/day
Seafood	8 oz-eq/wk	15 oz-eq/wk	N/A
Meats, poultry, eggs	26 oz-eq/wk	26 oz-eq/wk	Eggs 3 oz-eq/wk
Nuts, seeds, soy products	5 oz-eq/wk	5 oz-eq/wk	Nuts, seeds: 7 oz-eq/wk Soy products: 8 oz-eq/wk Legumes: 6 oz-eq/wk
Oils	27 g/day	27 g/day	27 g/day
Calories for other uses	270 kcal/day	260 kcal/day	290 kcal/day

Note. c = cup; eq = equivalents; g = gram; kcal = kilocalorie; oz = ounce; U.S. = United States; wk = week.

Adapted from Appendix 3, 4, and 5 (pages 79-88) in the U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015–2020 Dietary Guidelines for Americans. 8th Edition. December 2015. Accessed from: <http://health.gov/dietaryguidelines/2015/guidelines/>

Office of the Disease Prevention and Health Promotion (ODPHP; <https://health.gov>)



Reducing the amount of meat and adding more beans and vegetables to stews, or selecting seafood twice a week are strategies to decrease saturated fat intake.

considered the worst type of fat because of its association with CVD mortality and intake should be as low as possible (de Souza et al., 2015). Small amounts of natural trans fats are formed in animals and found in meats and milk; consuming low-fat or fat-free versions of these products is encouraged (HHS & USDA).

The recommendation to limit cholesterol intake to 300 mg daily *is not included in the 2015 guideline* as there is inadequate evidence of a relationship between dietary cholesterol intake and serum values (Fernandez, 2012; Kanter et al., 2012). Instead, data demonstrate body weight, genetic traits, age, and gender have greater influence on serum cholesterol values than diet (Alphonse & Jones, 2016; Anagnostis et al., 2015). Further, NHANES reports (USDA, 2014) show the average daily cholesterol intake is 270 mg and below the 300 mg threshold (HHS & USDA, 2015, p. 31).

Americans consume approximately 3,440 mg of sodium daily (HHS & USDA, 2015, p. 58), exceeding the less than 2,300 mg/day recommendation for those age 14 and older. The previous guideline recommendation limiting sodium intake to 1,500 mg for those over age 50; all persons with hypertension, diabetes, or kidney disease; and all African Americans *has been removed from the 2015 guidelines* (Health Policy Brief, 2016). Substantial data demonstrate reducing sodium intake lowers blood pressure, CVD and stroke risk, but an Institute of Medicine (2013) report presented evidence that there was no health benefit of the reduced goal and in some populations, low sodium intake may lead to adverse events.

Strong evidence shows added sugar intake is associated with CVD mortality (Yang et al., 2014), hypertension (Brown et al., 2011), obesity, and diabetes (Hu & Malik, 2010). A new recommendation

advises that *less than 10% of daily calories should come from added sugars*. Natural sugars are found in foods such as fruits and milk, whereas added sugars are sweeteners added during food processing that increase calories. Added sugars include high fructose corn syrup, lactose, malt syrup, and sugars from concentrated juices (HHS & USDA, 2015, p. 12) and are common in beverages, candy, and baked sweets (Huth et al., 2013). Low-calorie sweeteners (e.g., sucralose) are designated safe to consume but while they may reduce calories, benefits on long-term weight loss have not been established (HHS & USDA, p. 31).

Guideline 4: Shift to Healthier Food and Beverage Choices

Years of data have documented the eating patterns of Americans, revealing diets that are *low* in vegetables, fruits, dairy products, whole grains, oils, and seafood consumption but are *above* the recommended intake limits for refined grains, added sugars, saturated fats, and sodium (HHS & USDA, 2015). Protein is the only nutrient at the recommended level, but sex group data show teenage boys and men eat more than the recommended amounts.

The 2015-2020 guidelines recommend shifting to nutrient-dense foods that align with personal and cultural preferences. The guidelines propose “shift” strategies such as choosing vegetables as snacks or increasing the amounts of vegetables and decreasing the amount of meat or refined grains in mixed dishes. Suggested shifts to increase fruit intake include serving fruits as side dishes or dessert. To improve whole grain intake, shifting from white breads to whole wheat or from white rice to brown is advised. Other whole grains high in fiber and protein include quinoa, amaranth, or barley.

Healthy shifts for dairy products include switching to low-fat or fat-free versions of milk and cheese, or choosing low-sugar yogurt or fortified soy products (HHS & USDA, 2015, p. 49). Reducing the amount of meat and adding more beans and vegetables to stews, or selecting seafood twice a week are strategies to decrease saturated fat intake. Sugar and sodium intake can improve by switching from soda to water, exchanging a cookie for fruit, or choosing unsalted nuts and low-sodium soups. Using liquid instead of solid fats (e.g., butter) is a healthy shift; oil choices should be high in poly- and monounsaturated fats such as sunflower or canola.

Alcohol and caffeine were addressed in the guideline. Moderate alcohol use was recommended with a limit of one drink daily for women and up to two drinks daily for men (HHS & USDA, 2015). Caffeine is not a nutrient, but was considered in the guidelines as it is a component in foods and beverages. Most of the evidence regarding caffeine addressed coffee intake, showing it was not associated with chronic disease risk. *A new statement indicates a healthy eating pattern can include three to five 8-ounce cups per day of coffee* (HHS & USDA, p. 33).

Guideline 5: Support Healthy Eating Patterns for All

Nutrition is a population health issue that requires attention to the individual and their surrounding environments. A multifactorial approach that addresses diet and physical activity in the context of home, work, school, and community settings is recommended. Successful change requires that “everyone has a role” (HHS & USDA, 2015, p. 64) in creating and maintaining healthy eating patterns. Strategies to encourage healthy eating in the home include modifying recipes to healthier versions and encouraging families to plan and cook meals together. In schools, lunch programs and cafeterias need nutrient-dense food choices and scheduled time for physical activity is needed. For those in work settings, vending machines with healthier options and planned times for activity breaks are possibilities. At the community level, farmer’s markets and community gardens can improve the supply of healthy foods, and safe public spaces are needed for physical activity (HHS & USDA).

Food and Drug Administration (FDA) Contributions

In 2015, the FDA recommended *the removal of artificial trans fats from processed foods* and in 2016,



Table 2. Main Messages in the 2015-2020 Dietary Guidelines

What's New	What's the Same
Emphasis on a healthy eating pattern	Healthy eating is the most powerful to prevent chronic disease
U.S.-style, Mediterranean, or vegetarian healthy eating patterns are recommended	Nutrition requirements can all be met with a balanced diet
Eat a variety of nutrient-dense foods	Eat more fruits, vegetables and grains, with 50% coming from whole grains
Less than 10% of calories daily should come from added sugars	Eat less saturated fats, sodium, and added sugars
The recommendation to limit cholesterol to 300 mg daily has been removed	Consume low-fat or fat-free dairy products
Encourage teenage boys and men to reduce protein consumption of meat, eggs, and poultry	Eat lean meats, poultry, nuts, and seeds as protein sources; avoid processed meat products
For those over age 14, limit daily sodium to 2,300 mg. The recommendation of 1,500 mg/day for specific groups was removed.	Use plant-based oils or natural oils found in foods such as nuts and seeds
3–5 cups of coffee/day is part of a healthy eating pattern	Limit alcohol consumption to one drink/day for women and two drinks/day for men
Shift to healthier choices in every food group	Eat 8 oz of seafood weekly
Support healthy eating patterns across settings (home, school, work, communities)	The My Plate method is a helpful tool to guide portion sizes
Food label revisions include added sugars, Vitamin D, potassium, and serving sizes	Engage in regular physical activity
All trans fats will be removed from food over the next 3 years	Be aware of fats: Type matters more than amounts

Adapted from U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015–2020 Dietary Guidelines for Americans. 8th Edition. December 2015. Accessed from: <http://health.gov/dietaryguidelines/2015/guidelines/>



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Years of data have documented the eating patterns of Americans, revealing diets that are low in vegetables, fruits, dairy products, whole grains, oils, and seafood consumption but are above the recommended intake limits for refined grains, added sugars, saturated fats, and sodium.

revisions to nutrient food labels were announced. Added sugars will be required on the labels; potassium and Vitamin D will also be included as data consistently show low levels of these nutrients (Hoy & Goldman, 2012; Looker et al., 2011). Vitamin A and C content is not required as these deficiencies are no longer common. Serving sizes are being adjusted to reflect the amounts people are consuming. If items are between one and two servings, the package will be labeled as one serving. Implementation of these changes is expected by July 2018.

In summary, the 2015-2020 Dietary Guidelines emphasize healthy eating patterns that are customized to individuals and families and include nutrient-dense foods to improve health and reduce chronic disease risk (Table 2). A diet that is higher in vegetables, fruits and whole grains, with low-fat dairy products, seafood, and plant-based proteins is recommended. Lower amounts of meats, especially processed forms, refined grains foods, and sugar-sweetened drinks or foods are advised. Moderate alcohol and caffeine intake is acceptable in a healthy eating pattern. Strategies to support healthy eating and physical activity transcend home, work, school, and community environments.

Nursing Implications

Optimal nutrition plays an important role in many aspects of health including growth and development, health promotion, and acute and chronic disease management (DiMaria-Ghalili et al., 2014). Nutrition interventions can prevent disease, improve quality of life, and reduce healthcare costs (de van der Schueren et al., 2014). In the United States, with the epidemic of obesity (Fryar et al., 2016a), an aging population, high chronic disease prevalence, and data showing 33% to 50% of hospitalized patients are malnourished (de van der

Schueren et al.), nutrition issues abound. A multifaceted interprofessional team approach to improve nutritional health requires registered nurses (RNs), nurse practitioners (NPs), physicians, registered dietitian nutritionists, social workers, and resources from community organizations (e.g., home-delivered meal programs, food banks) to achieve the 2015-2020 Dietary Guideline goals (HHS & USDA, 2015).

As patient-centered providers and the largest healthcare occupation in the United States (DiMaria-Ghalili et al., 2014), RNs are well-positioned to improve the dietary health of patients, families, and communities. RNs assess clinical indicators of nutritional health including cognitive, functional and hydration status, body weight, eating habits, and appetite (DiMaria-Ghalili et al., 2016) and formulate clinical judgments about patients that are amenable to nursing action. Nursing nutrition diagnoses commonly address imbalanced nutrition: less than or more than body requirements intake (Herdman & Kamitsuru, 2014) and may be related to food ingestion, metabolism, or hydration status issues (DiMaria-Ghalili et al., 2014). Nurses support nutrition interventions during transitions from hospitals to homes that may involve tube feedings or parenteral nutrition as well as diet management plans to control carbohydrate or fat intake for chronic conditions, including CVD and diabetes. RNs coach patients toward health, arrange for nutritious home-based meals, and reinforce nutrition education (Reed, 2014; Smolowitz et al., 2015). Reed asserts that nurses also identify patient stressors that negatively affect dietary intake and body composition and encourage stress-reduction strategies, adequate sleep, and increased intake of antioxidant-rich foods to attenuate these adverse changes. Dietary counseling is a consis-

tent key nursing activity implemented during hospitalizations, discharge education plans, and primary care clinic encounters (Ilmonen et al., 2012) and accounts for 14% of home care services rendered (Jones et al., 2012).

Nutrition assessment guides nursing interventions. Tools (Table 3) for evaluating dietary intake include food diaries, computer programs, and phone applications (Henning, 2009). Standardized instruments such as the Mini Nutritional Assessment (Cereda, 2012), the Rapid Eating Assessment

for Patients, and the Wave Activity Variety and Excess screen are useful (Gans et al., 2003). Nutrition assessments also include physical examinations, mental and functional health inventories, anthropometric measures (e.g., body mass index), and clinical laboratory testing.

The 2015-2020 Dietary Guidelines are intended to guide wellness promotion strategies for a healthy population (HHS & USDA, 2015). For those with chronic disease, specific nutrition issues necessitate different strategies and a variety of nursing actions are needed to optimize nutrition and health. Nurse-driven evidence-based interventions tailored to individuals, population subgroups (e.g., children, elders), or communities are recommended. For example, diet interventions for adolescents featuring text messaging have been successful (Militello et al., 2012). In hospitals, improved meal appearance increased patient's intake and decreased readmissions (Navarro et al., 2016). A review of telehealth visits for community-dwelling elders demonstrated improved outcomes for diet adherence (van den Berg et al., 2012) and school-based programs to improve diet patterns, demonstrated improvements in fruit intake (Evans et al., 2012). Nurses also implement dietary interventions that have been shown to reduce the prevalence, severity, or morbidity related to specific diseases such as CVD, diabetes, cancer, or celiac disease (Kris-Etherton et al., 2014).

Data show that healthcare professionals provide nutrition counseling on a daily-to-weekly basis, but do not report high confidence in their abilities to manage these issues (Hanson et al., 2016), suggesting there is a need to improve nutrition education in training and practice settings. In nursing schools, nutrition content can be taught in a single course or embedded within several classes, but nurses consistently report the content was not sufficient (DiMaria-Ghalili et al., 2014; Ilmonen et al., 2012; Reed, 2014). DiMaria-Ghalili et al. (2014) documented that almost all programs taught nutrition assessment, diet counseling, and enteral and parenteral nutrition, but did not always include biochemistry courses or clinical nutrition learning experiences, implying a need to bolster nutrition content and provide continuing education in practice organizations. A survey of interprofessional healthcare practitioners (Hanson et al.) documented that NPs had the highest prevalence of daily nutrition-related encounters compared with physicians, physician assistants,

Table 3. Nutrition Resources

<p>2015-2020 Dietary Guidelines for Americans https://health.gov/dietaryguidelines/2015/resources.asp This site includes the guideline, a professional's toolkit, powerpoint presentation, patient handouts, and graphics</p>
<p>Choose My Plate https://www.choosemyplate.gov/ This site provides healthcare professional and age and culturally relevant patient resources</p>
<p>American Academy of Nutrition and Dietetics http://www.eatright.org This site has resources for nutrition assessment and education, including dietary guidelines, recipes, policy updates.</p>
<p>The Alliance to Advance Patient Nutrition http://malnutrition.com/ This multidisciplinary organization supports nutrition practices for patients and was founded by the Academy of Medical-Surgical Nurses, the Academy of Nutrition and Dietetics, the Society of Hospital Medicine and Abbott Nutrition Nurse. A resource toolkit is available at http://malnutrition.com/getinvolved/hospitalnutritiontoolkit</p>
<p>FDA—Food Label Changes http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/ucm385663.htm This site includes the proposed revisions and infographics of the new labels.</p>
<p>Patient Protection and Affordable Care Act 2010 http://www.hhs.gov/healthcare/facts-and-features/fact-sheets/preventive-services-covered-under-aca/ Link to the preventive services coverage including dietary counseling.</p>
<p>Nutrition Assessment Tools Mini Nutrition Assessment for elders http://www.mna-elderly.com/forms/MNA_english.pdf Weight Activity Variety and Excess (WAVE) Rapid Eating and Activity Assessment for Patients (REAP) https://www.brown.edu/academics/public-health/centers/community-health-promotion/research-tools-and-resources. Instructions on the site require an email to secure use for both tools. My Fitness Pal www.myfitnesspal.com USDA Supertracker https://www.supertracker.usda.gov/</p>

The registered dietitian nutritionist (RDN) is a certified professional with education and practice expertise in food and nutrition science, biochemistry, pharmacology, and the behavioral-social sciences.

pharmacists, dentists, and physical therapists, but also reported the nutrition education content in their advanced practice nursing program was not adequate for their professional role.

Collaboration with other healthcare professionals is essential to support the implementation of the 2015-2020 Dietary Guidelines for patients, communities, and organizations. The registered dietitian nutritionist (RDN) is a certified professional with education and practice expertise in food and nutrition science, biochemistry, pharmacology, and the behavioral-social sciences (American Academy of Nutrition and Dietetics, 2016). RDNs are pivotal members of the interprofessional team who address nutrition issues across the lifespan in hospitals, clinics, home care settings, or community health organizations (Eliot & Kolasa, 2015). RDNs interact with RNs, physicians, NPs, pharmacists, and physical therapists. They conduct nutritional assessments, evaluate clinical data to establish diagnoses, and engage with patients, families, and communities to implement plans of care (Academy of Nutrition and Dietetics, 2013). RDNs are uniquely qualified to manage specific nutrient issues such as vitamin or mineral deficiencies with older or complex clients, teach carbohydrate counting to facilitate glycemic control in insulin-dependent patients, institute refeeding plans in those with eating disorders, provide instruction in food safety, and develop healthy recipes to support wellness. Lastly, as valued members of the interprofessional team, RDNs collaborate and consult with nursing and other healthcare professionals to provide nutrition education content that supports these practitioners' capacity to address nutrition-related issues.

The 2015-2020 Dietary Guidelines provide evidence-based recommendations and a framework to guide interventions to support the health of Americans. Nurses, RDNs, and other healthcare professionals must work together to promote healthy eating patterns for the patients, families,

and communities they serve. Coordinated strategies are required for successful implementation of the guideline goals and should include positive practical messages tailored to the unique needs of individuals and population groups along with access to information and resources regarding nutrition in communities, schools, clinics, and healthcare organizations (Ivens et al., 2016). Beyond the collaborative efforts of nurses, dietitians and other healthcare professionals, organizations and government agencies must ensure a safe and equitable food supply to create a culture of health that will achieve the 2015-2020 Dietary Guideline goals. ■

Patricia A. Rouen, PhD, FNP-BC, is an Associate Professor at McAuley School of Nursing, University of Detroit Mercy, Detroit, Michigan.

Brenna R. Wallace is a Senior Dietetics student at Michigan State University, East Lansing, Michigan.

The authors declare no conflicts of interest.

Address for correspondence: Patricia A. Rouen, PhD, FNP-BC, McAuley School of Nursing, University of Detroit Mercy, 4001 W. McNichols Road, Detroit, MI 48221 (rouenpa@udmercy.edu).

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REFERENCES

- Academy of Nutrition and Dietetics. (2016). *What is a registered dietitian nutritionist?* Retrieved from <http://www.eatrightpro.org/resources/about-us/what-is-an-rdn-and-dtr/what-is-a-registered-dietitian-nutritionist>
- Alphonse, P. A., & Jones, P. J. (2016). Revisiting human cholesterol synthesis and absorption: The reciprocity paradigm and its key regulators. *Lipids*, 51(5), 519-536. doi:10.1007/s11745-015-4096-7
- American Nurses Association. (2010). *Nursing: Scope and Standards of Practice* (2nd ed.). Silver Spring, MD: Author.
- Anagnostis, P., Stevenson, J. C., Crook, D., Johnston, D. G., & Godland, I. F. (2015). Effects of menopause, gender and age on lipids and high-density lipoprotein cholesterol subfractions. *Maturitas*, 81(1), 62-68. <http://dx.doi.org/10.1016/j.maturitas.2015.02.262>
- Bazzano, L. A., Hu, T., Reynolds, K., Yao, L., Bunol, C., Lui, Y., ..., He, J. (2014). Effects of low-carbohydrate and low-fat diets: A randomized trial. *Annals of Internal Medicine*, 161(5), 309-318. doi:10.7326/M14-0180
- Brown, I. J., Stamler, J., Van Horn, L., Robertson, C. E., Chan, Q., Dyer, A. R., ..., Elliott, P. (2011). Sugar-sweetened beverage, sugar intake of individuals, and their blood pressure: International study of macro/micronutrients and blood pressure. *Hypertension*, 57(4), 695-701. doi:10.1161/HYPERTENSIONAHA.110.165456
- Cahill, L. E., Pan, A., Chiuve, S. E., Sun, Q., Willet, W. C., Hu, F. B., & Rimm, E. B. (2014). Fried-food consumption and risk of type 2 diabetes and coronary artery disease: A prospective study in 2 cohorts of US women and men. *The American Journal of Clinical Nutrition*, 100(2), 667-675. doi:10.3945/ajcn.114.084129. Retrieved from <http://ajcn.nutrition.org/content/early/2014/06/18/ajcn.114.084129.full.pdf>
- Centers for Disease Control and Prevention. (2014, February). *National health and nutrition examination survey, 2013-2014*. Retrieved from http://www.cdc.gov/nchs/nhanes/about_nhanes.htm
- Centers for Disease Control and Prevention. (2016). *Chronic disease prevention and health promotion*. Retrieved from <http://www.cdc.gov/chronicdisease/>
- Centers for Medicare & Medicaid Services. (2015, May). *Chronic care management services*. Retrieved from <https://www.cms.gov/>

- Outreach-and-Education/Medicare-Learning-Network-MLN/MLN-Products/Downloads/ChronicCareManagement.pdf
- Cereda, E. (2012). Mini nutritional assessment. *Current Opinion in Clinical Nutrition and Metabolic Care*, 15(1), 29-41. doi:10.1097/MCO.0b013e32834d7647
- de Souza, R. J., Mente, A., Maroleanu, A., Cozma, A. I., Ha, V., Kishibe, T., ..., Anand, S. S. (2015). Intake of saturated and trans unsaturated fatty acids and risk of all cause mortality, cardiovascular disease, and type 2 diabetes: Systematic review and meta-analysis of observational studies. *BMJ*, 351. doi:http://dx.doi.org/10.1136/bmj.h3978
- de van der Schueren, M., Elia, M., Gramlich, L., Johnson, M. P., Lim, S. L., Philipson, T., ..., Prado, C. M. (2014). Clinical and economic outcomes of nutrition interventions across the continuum of care. *Annals of the New York Academy of Sciences*, 1321, 20-40. doi:10.1111/nyas.12498
- DiMaria-Ghalili, R. A., Gilbert, K., Lord, L., Neal, T., Richardson, D., Tyler, R., ..., American Society for Parenteral and Enteral Nutrition. (2016). Standards of nutrition care practice and professional performance for nutrition support and generalist nurses. *Nutrition in Clinical Practice*, 31(4), 527-547. doi:10.1177/0884533616653835
- DiMaria-Ghalili, R. A., Mirtallo, J. M., Tobin, B. W., Hark, L., Van Horn, L., & Palmer, C. A. (2014). Challenges and opportunities for nutrition education and training in the health care professions: Intraprofessional and interprofessional call to action. *The American Journal of Clinical Nutrition*, 99(Suppl. 5), 1184S-1193S. doi:10.3945/ajcn.113.073536
- Ekman, I., Swedberg, K., Taft, C., Lindseth, A., Norberg, A., Brink, E., ..., Sunnerhagen, K. S. (2011). Person-centered care--Ready for prime time. *European Journal of Cardiovascular Nursing*, 10(4), 248-251. doi:10.1016/j.ejcnurse.2011.06.008
- Eliot, K. A., & Kolasa, K. M. (2015). The value in interprofessional, collaborative-ready nutrition and dietetics practitioners. *Journal of the Academy of Nutrition and Dietetics*, 115(10), 1578-1588. doi:http://dx.doi.org/10.1016/j.jand.2015.03.025
- Estruch, R., Ros, E., Salas-Salvado, J., Covas, M. I., Corella, D., Aros, F., ..., Martinez-Gonzalez, M. A. (2013). Primary prevention of cardiovascular disease with a mediterranean diet. *The New England Journal of Medicine*, 368(14), 1279-1290. doi:10.1056/NEJMoa1200303
- Evans, C. E., Christian, M. S., Cleghorn, C. L., Greenwood, D. C., & Cade, J. E. (2012). Systematic review and meta-analysis of school-based interventions to improve daily fruit and vegetable intake in children aged 5 to 12 y. *The American Journal of Clinical Nutrition*, 96(4), 889-901. doi:10.3945/ajcn.111.030270
- Fernandez, M. L. (2012). Rethinking dietary cholesterol. *Current Opinion in Clinical Nutrition and Metabolic Care*, 15(2), 117-121. doi:10.1097/MCO.0b013e32834d2259
- Food and Drug Administration. (2015, June). *Talking about trans fats: What you need to know*. Retrieved from <http://www.fda.gov/downloads/Food/IngredientsPackagingLabeling/UCM239579.pdf>
- Food and Drug Administration. (2016, May 16). *News Release: FDA modernizes nutrition facts label for packaged foods*. Retrieved from <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm502182.htm>
- Fryar, C. D., Carroll, M. D., & Odgen, C. L. (2016a, July). *Prevalence of overweight, obesity, and extreme obesity among adults aged 20 and over: United States, 1960-1962 through 2013-14*. Retrieved from http://www.cdc.gov/nchs/data/hestat/obesity_adult_13_14/obesity_adult_13_14.pdf
- Fryar, C. D., Carroll, M. D., & Odgen, C. L. (2016b, July). *Prevalence of overweight and obesity among children and adolescents 2-18 years: United States, 1963-1965 through 2013-14*. Retrieved from http://www.cdc.gov/nchs/data/hestat/obesity_child_13_14/obesity_child_13_14.pdf
- Gans, K. M., Ross, E., Barner, C. W., Wylie-Rosett, J., McMurray, J., & Eaton, C. (2003). REAP and WAVE: New tools to rapidly assess/discuss nutrition with patients. *The Journal of Nutrition*, 133(2), 556S-562S. Retrieved from <http://jn.nutrition.org/content/133/2/556S.full.pdf+html>
- George, S. M., Ballard-Barbash, R., Manson, J. E., Reedy, J., Shikany, J. M., Subar, A. F., ..., Neuhauser, M. L. (2014). Comparing indices of diet quality with chronic disease mortality risk in postmenopausal women in the Women's Health Initiative Observational Study: Evidence to inform national dietary guidance. *American Journal of Epidemiology*, 180(6), 616-625. doi:10.1093/aje/kwu173
- Hanson, C., Staskiewicz, A., Woscyna, G., Lyden, E., Ritsema, T., Norman, J., ..., Miller, C. (2016). Frequency and confidence of healthcare practitioners in encountering and addressing nutrition-related issues. *Journal of Allied Health*, 45(1), 54-61.
- Health Policy Brief: Final 2015-20 Dietary Guidelines for American. (2016, March 31). *Health Affairs*, 1-7.
- Healthy People 2020. *Nutrition and weight status objectives*. Washington, DC: U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/topic/nutrition-and-weight-status/objectives>. Accessed July 19, 2016.
- Henning, M. (2009). Nursing's role in nutrition. *Computers, Informatics, Nursing*, 27(5), 301-306. doi:10.1097/NCN.0b013e31819f7ca8
- Herdman, T. H., & Kamitsuru, S. (2014). *NANDA International Nursing Diagnoses: Definitions and Classification 2015-2017* (10th ed.). Hoboken, NJ: Wiley-Blackwell.
- Hoy, M. K., & Goldman, J. D. (2012, September). *Potassium Intake of the U.S. Population: What We Eat In America, NHANES 2009- 2010*. Food Surveys Research Group Dietary Data Brief No. 10. Retrieved from <http://ars.usda.gov/Services/docs.htm?docid=19476>
- Hu, F. B., & Malik, V. S. (2010). Sugar-sweetened beverages and risk of obesity and type 2 diabetes: Epidemiologic evidence. *Physiology & Behavior*, 100(1), 47-54. doi:10.1016/j.physbeh.2010.01.036
- Huth, P. J., Fulgoni, V. L., Keast, D. R., Park, K., & Auestad, N. (2013). Major food sources of calories, added sugars, and saturated fat and their contribution to essential nutrient intakes in the U.S. diet: Data from the National Health and Nutrition Examination Survey (2003-2006). *Nutrition Journal*, 12, 116. Retrieved from <http://www.nutritionj.com/content/12/1/116>
- Ilmonen, J., Isolauri, E., & Laitinen, K. (2012). Nutrition education and counselling practices in mother and child health clinics: Study amongst nurses. *Journal of Clinical Nursing*, 21(19-20), 2985-2994. doi:10.1111/j.1365-2702.2012.04232.x
- Institute of Medicine. (2013). *Sodium Intake in Populations: Assessment of Evidence*. Washington, DC: The National Academies Press. Retrieved from <http://www.nationalacademies.org/hmd/Reports/2013/Sodium-Intake-in-Populations-Assessment-of-Evidence.aspx>
- Ivens, B. J., Smith Edge, M., & Food and Nutrition Science Solutions Joint Task Force. (2016). Translating the dietary guidelines to promote behavior change: Perspectives from the food and nutrition science solutions joint task force. *Journal of the Academy of Nutrition and Dietetics*, 116(10), 1697-1702. doi:http://dx.doi.org/10.1016/j.jand.2016.07.014
- Jahns, L., Raatz, S. K., Johnson, L. K., Kranz, S., Silverstein, J. T., & Picklo, M. J. (2014). Intake of seafood in the US varies by age, income, and education level but not by race-ethnicity. *Nutrients*, 6(12), 6060-6075. doi:10.3390/nu6126060
- Jones, A. L., Harris-Kojetin, L., & Valverde, R. (2012). Characteristics and use of home health care by men and women aged 65 and over. *National Health Statistics Reports*, (52). Retrieved from <https://www.cdc.gov/nchs/data/nhsr/nhsr052.pdf>
- Kanter, M. M., Kris-Etherton, P. M., Fernandez, M. L., Vickers, K. C., & Katz, D. L. (2012). Exploring the factors that affect blood cholesterol and heart disease risk: Is dietary cholesterol as bad for you as history leads us to believe? *Advances in Nutrition*, 3(5), 711-717. doi:10.3945/an.111.001321
- Kris-Etherton, P. M., Akabas, S. R., Bales, C. W., Bistrian, B., Brawn, L., Edwards, M. S., ..., Van Horn, L. (2014). The need to advance nutrition education in the training of health care professionals and recommended research to evaluate implementation and effectiveness. *American Journal of Clinical Nutrition*, 99(Suppl.), 1153S-1166S. doi:10.3945/ajcn.113.073502
- Looker, A. C., Johnson, C. L., Lacher, D. A., Pfeiffer, C. M., Schleicher, R. L., & Sempos, C. T. (2011). Vitamin D status: United States, 2001-2006. *NCHS Data Brief*, (59), 1-8. Retrieved from <http://www.cdc.gov/nchs/data/databriefs/db59.pdf>
- McEvoy, C. T., Temple, N., & Woodside, J. V. (2012). Vegetarian diets, low-meat diets and health: A review. *Public Health Nutrition*, 15(12), 2287-2294. doi:http://dx.doi.org/10.1017/S1368980012000936
- Militello, L. K., Kelly, S. A., & Melnyk, B. M. (2012). Systematic review of text-messaging interventions to promote healthy behaviors in pediatric and adolescent populations: Implications for clinical

- practice and research. *Worldviews on Evidence-Based Nursing*, 9(2), 66-77. doi:10.1111/j.1741-6787.2011.00239.x
- Navarro, D. A., Boaz, M., Krause, I., Elis, A., Chernov, K., Giabra, M., ..., Singer, P. (2016). Improved meal presentation increases food intake and decreases readmission rates in hospitalized patients. *Clinical Nutrition*, 35(5), 1153-1158. doi:10.1016/j.clnu.2015.09.012
- Nightingale, F. (1969). *Notes on Nursing: What It Is and What It Is Not*. New York, NY: Dover.
- Patient Protection and Affordable Care Act, 42 U.S.C. § 18001 (2010). Accessed July 19, 2016. Retrieved from <https://www.hhs.gov/healthcare/>
- Public Health Reports. (1983, September-October). *Health promotion: Improved nutrition*. Supplement 132-155. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2047163/>
- Reed, D. (2014). Healthy eating for healthy nurses: Nutrition basics to promote health for nurses and patients. *Online Journal of Issues in Nursing*, 19(3), 7. doi:10.3912/OJIN.Vol19No03Man07
- Reedy, J., Krebs-Smith, S. M., Miller, P. E., Liese, A. D., Kahle, L. L., Park, Y., & Subar, A. F. (2014). Higher diet quality is associated with decreased risk of all-cause, cardiovascular disease, and cancer mortality among older adults. *The Journal of Nutrition*, 144(6), 881-889. doi:10.3945/jn.113.189407
- Slawson, D. L., Fitzgerald, N., & Morgan, K. T. (2013). Position of the Academy of Nutrition and Dietetics: The role of nutrition in health promotion and chronic disease prevention. *Journal of the Academy of Nutrition and Dietetics*, 113(7), 972-979. doi:10.1016/j.jand.2013.05.005
- Smolowitz, J., Speakman, E., Wojnar, D., Whelan, E. M., Ulrich, S., Hayes, C., & Wood, L. (2015). Role of the registered nurse in primary health care: Meeting health care needs in the 21st century. *Nursing Outlook*, 63(2), 130-136. doi:<http://dx.doi.org/10.1016/j.outlook.2014.08.004>
- U.S. Department of Agriculture, Agricultural Research Service. (2014). Nutrient intakes from food and beverages: Mean amounts consumed per individual, by gender and age. *What We Eat in America, NHANES 2011-2012*. Retrieved from https://www.ars.usda.gov/SP2UserFiles/Place/80400530/pdf/1112/Table_1_NIN_GEN_11.pdf
- U.S. Department of Health and Human Services and U.S. Department of Agriculture. (2015, December). *2015-2020 Dietary Guidelines for Americans, 8th Edition*. Retrieved from <http://health.gov/dietaryguidelines/2015/guidelines>
- van den Berg, N., Schumann, M., Kraft, K., & Hoffmann, W. (2012). Telemedicine and telecare for older patients—a systematic review. *Maturitas*, 73(2), 94-114. Retrieved from <http://dx.doi.org/10.1016/j.maturitas.2012.06.010>
- Yang, Q., Zhang, Z., Gregg, E. W., Flanders, W. D., Merritt, R., & Hu, F. B. (2014). Added sugar intake and cardiovascular diseases mortality among US adults. *JAMA Internal Medicine*, 174(4), 516-524. doi:10.1001/jamainternmed.2013.13563
- Yates, C. M., Calder, P., & Rainger, G. E. (2014). Pharmacology and therapeutics of omega-3 polyunsaturated fatty acids in chronic inflammatory disease. *Pharmacology & Therapeutics*, 141, 272-282. doi:10.1016/j.pharmthera.2013.10.010

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