

# Nutrition and Physical Activity Interventions for Adults in the General Population: A Position Paper of the Academy of Nutrition and Dietetics and the American Council on Exercise



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## ABSTRACT

It is the position of the Academy of Nutrition and Dietetics and the American Council on Exercise that nutrition and physical activity interventions delivered by qualified nutrition and exercise practitioners, within their scopes of practice, can improve lifestyle behaviors and cardiometabolic risk factors for adults in the general population. Effective interventions require client-centered, evidence-based care provided by skilled practitioners using inclusive, dynamic methods, and collaboration with an interprofessional team, as appropriate. Increased access to evidence-based nutrition and physical activity interventions is necessary to improve public health and should be a target for policymakers, health care systems, and practitioners. Adults who attain a nutritious diet and adequate physical activity have improved overall health compared with their counterparts. However, most adults do not meet population recommendations. Qualified nutrition and exercise practitioners can collaborate with clients and interprofessional teams to provide nutrition and physical activity interventions and improve outcomes. However, recent guidelines have identified a need for guidance on best practices for delivering behavioral lifestyle counseling, referring to other practitioners, and improving access to disease prevention services. This Academy of Nutrition and Dietetics Position Paper aims to address common barriers for nutrition and exercise practitioners providing nutrition and physical activity interventions for adults in the general population, and best practices for overcoming these barriers. Collective action from interprofessional practitioners and implementation partners can increase access to high-quality, individualized services to prevent disease and improve health and well-being on a population level. This position was approved in July 2024 and will remain in effect until December 31, 2031.

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## POSITION STATEMENT

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**I**NDIVIDUALS WHO CONSISTENTLY attain a nutritious diet and adequate physical activity have improved overall health and lower incidence of noncommunicable diseases compared with their counterparts,<sup>1-3</sup> which contributes to lower health care costs.<sup>4,5</sup> Unfortunately, most adults in the United States do not meet dietary intake or physical activity population-based recommendations.<sup>1,6</sup> Several barriers exist to achieving these recommendations, and these vary among individuals and within each individual over time.

Qualified nutrition and exercise practitioners provide client-centered, individualized, evidence-based care to

address each client's goals and challenges.<sup>7</sup> However, nutrition and exercise practitioners may themselves encounter barriers to optimal practice when delivering multicomponent interventions. For example, clients may presume registered dietitian nutritionists (RDNs) also provide detailed physical activity coaching. However, most RDNs only have the training and skills to provide basic physical activity recommendations and may lack interprofessional referral systems for clients with individualized or advanced physical activity needs.<sup>8,9</sup> Correspondingly, nutrition interventions provided by exercise practitioners are heterogeneous, ranging from appropriately providing population-based

nutrition guidelines to inappropriately crafting meal plans.<sup>10</sup> Recent guidelines on delivering nutrition and physical activity interventions for disease prevention have identified the need for guidance on best practices for delivering behavioral lifestyle counseling, referring to other practitioners,<sup>11</sup> and improving access to disease prevention services.<sup>7</sup>

## POSITION PAPER FOCUS

This Position Paper aims to address common barriers for nutrition and exercise practitioners providing nutrition and physical activity interventions for adults in the general population,<sup>7,11</sup> as well as best practices for overcoming

these barriers. The general population is defined as adults who are presumably healthy or who have cardiometabolic disease risk factors such as overweight or obesity, impaired glucose tolerance, or hypertension.<sup>7</sup> This article does not concentrate on adults diagnosed with specific diseases, but otherwise applies to practitioners working with clients of any race or ethnicity, sex or gender, age, ability, or other demographic group. Specific dietary and physical activity recommendations and methods for individualizing recommendations extend beyond this article's scope but can be found in current population-based guidelines.<sup>6,7,11,12</sup> Specifically, this Position Paper on nutrition and physical activity interventions describes:

- Scope of practice and interprofessional collaboration,
- Client-centered, inclusive communication and goal setting, and
- Access to and coverage for disease prevention services.

This article primarily references resources and organizations from the United States, but the content may have relevance for various settings or countries.

## POSITION PAPER DEVELOPMENT

This Position Paper is a collaboration between the Academy of Nutrition and Dietetics (Academy) and the American Council on Exercise (ACE). Position Papers from the Academy are based on evidence rated as having moderate or high certainty,<sup>13</sup> as described in a systematic review.<sup>14</sup> An expert panel of nutrition and exercise practitioners and researchers developed the systematic review<sup>15</sup> and evidence-based practice guideline (EBPG)<sup>7</sup> supporting this Position Paper.

The supporting systematic review found that, in presumably healthy adults, nutrition and physical activity interventions provided by nutrition and/or exercise practitioners improved physical activity amount, fruit and vegetable intake, waist circumference, and fasting blood glucose concentrations (all moderate certainty evidence). In adults with cardiometabolic disease risk factors, these interventions improved vegetable intake (moderate certainty), physical activity amount (low

certainty), waist circumference (moderate certainty), fasting glucose levels (moderate certainty), achievement of 5% weight loss in adults with overweight or obesity (high certainty), and may improve quality of life (low certainty). The systematic review concluded that “nutrition and exercise practitioners play key roles in facilitating positive lifestyle behaviors to reduce cardiometabolic disease risk in adults.”<sup>15</sup>

The EBPG supporting this Position Paper provides a framework for delivering nutrition and physical activity interventions as well as implementation guidance and resources. Focus areas include screening and assessment; scope of practice; intervention amount and delivery methods; behavior change counseling or coaching approaches; individualizing population-based recommendations; and practicing according to inclusion, diversity, equity, and access principles.<sup>7</sup> The EBPG concludes that, “nutrition and exercise practitioners can consistently provide individualized, practical, and evidence-based interventions by seeking to understand their clients' needs, circumstances, and values and by co-creating interventions with the client and their allied health team.”<sup>7</sup> This EBPG is novel, as it addresses how to deliver individualized, combined nutrition and physical activity interventions within scope of practice and targets both nutrition and exercise practitioners.

Following the EBPG publication, a focus group of nutrition and exercise practitioners as well as the authors completed a survey to identify professional practice areas that seemed unclear, controversial, confusing, or important to policy.<sup>14</sup> Topics identified as requiring further clarification included scope of practice and interprofessional collaboration, client communication and goal setting, and coverage for services, which aligns with needs identified in current guidelines.<sup>7,11</sup> Thus, this Position Paper aims to address common barriers and consider best practices to overcome these barriers for practitioners providing nutrition and physical activity interventions for adults in the general population. This Position Paper underwent internal review by Academy and ACE staff and peer review by Academy and ACE members.

## SCOPE OF PRACTICE AND INTERPROFESSIONAL COLLABORATION

### Certifications and Credentialing

A variety of practitioners may provide nutrition and physical activity education, counseling, or coaching, but lack the specific skills and training needed to provide high-quality, effective care. Practitioners, unfortunately, do counsel or coach outside of their scope, and the public may have an unclear understanding of appropriate scopes of practice across all fields. Nutrition and exercise practitioners' professional scopes of practice have relatively clear boundaries defined by the individual practitioner's education, training, credentialing, experience, and demonstrated competence.<sup>16-19</sup> National certifications and credentialing bodies along with state licensure and regulations further regulate scopes of practice (Figure 1).<sup>19-22</sup> Nutrition and exercise practitioners ought to continually develop their education both to maintain certification and credentialing and to advance their knowledge and practice skills.

Credentialed or certified practitioners have their own capabilities and limitations that govern their day-to-day practices. Credentialing for RDNs includes uniform curriculum and specialized training, standards of practice and professional performance, continuing education requirements, and a code of ethics.<sup>18,21</sup> The Commission on Dietetic Registration defines varying practice and competence levels for RDNs ranging from novice to expert<sup>23</sup> and offers advanced credentialing for experts in their fields of practice, such as for a Board Certified Specialist in Sports Dietetics.<sup>24-26</sup> Even with such credentials and extensive exercise physiology knowledge, RDNs must only provide physical activity recommendations that follow population-based guidelines unless they hold a separate, accredited exercise certification (eg, certified personal trainer). The Commission on Dietetics Registration and Academy websites offers tools to identify credentialed RDNs.<sup>20,27</sup>

“Exercise practitioner” encompasses various certifications, including personal trainers, group fitness instructors, and strength and conditioning coaches, among others. Physical therapists and

| Practitioner  | Nutrition intervention scope   | Physical activity intervention scope   |
|---|--|--|
| Registered dietitian nutritionist   | <ul style="list-style-type: none"> <li>Conduct nutrition screening and provide nutrition counseling</li> <li>Provide MNT<sup>a</sup> using the Nutrition Care Process, including assessment, diagnosis, intervention, monitoring, and evaluation</li> <li>Conduct NFPE,<sup>b</sup> and order and assess nutrition-related biomarkers as competent</li> <li>Provide individualized nutrition recommendations and programming, including meal plans, dietary patterns, specialty diets, and/or dietary supplements</li> </ul> | <ul style="list-style-type: none"> <li>Share and promote population-based physical activity guidelines and resources</li> <li>Promote national exercise initiatives</li> <li>Estimate physical activity energy expenditure</li> <li>Discuss potential modes of physical activity for clients</li> <li>Contribute to research supporting nutrition and physical activity interventions</li> </ul>   |
| Exercise practitioner   | <ul style="list-style-type: none"> <li>Share and promote population-based dietary recommendations and resources</li> <li>Discuss the body's essential nutrients, actions of nutrients, and effects of deficiencies or excesses of nutrients</li> <li>Discuss basics of food preparation</li> <li>Provide basic nutrition education, as qualified</li> <li>Promote national nutrition initiatives</li> </ul>  | <ul style="list-style-type: none"> <li>Conduct health screenings and fitness assessments, specific to certification</li> <li>Provide safe, effective, client-centered exercise programming for apparently healthy individuals or those with special needs with medical clearance</li> <li>Develop effective exercise program design, education and instruction specific to certification</li> <li>Contribute to research supporting nutrition and physical activity interventions</li> </ul> |
| Health coach  | <ul style="list-style-type: none"> <li>Share and promote population-based dietary recommendations and resources</li> <li>Discuss basics of food preparation</li> <li>Discuss the body's essential nutrients, actions of nutrients, and effects of deficiencies or excesses of nutrients</li> <li>Promote national nutrition initiatives</li> </ul>   | <ul style="list-style-type: none"> <li>Share and promote population-based physical activity guidelines and resources</li> <li>Conduct health screenings and partner with clients to explore appropriate physical activity options</li> <li>Discuss potential modes of physical activity for clients</li> <li>Contribute to research supporting nutrition and physical activity interventions</li> </ul>  |
| <sup>a</sup> MNT = medical nutrition therapy.<br><sup>b</sup> NFPE = nutrition-focused physical exam. |  |  |

**Figure 1.** Scope of practice for registered dietitian nutritionists, exercise practitioners, and health coaches when delivering nutrition and physical activity interventions to adults in the general population. Adapted from references 16-19 and 22. This list intends to deliver an overview for scope of practice tasks often viewed as confusing and is not meant to be exhaustive of responsibilities within scope of practice for the professions listed.

athletic trainers receive credentialing from the Federation of State Boards of Physical Therapy and Board of Certification for the Athletic Trainer, respectively. Other exercise practitioners may obtain 1 of several health or fitness certifications, but certifications from agencies accredited by the National Commission for Certifying Agencies universally hold higher regard. Unless an exercise practitioner holds a separate credential as an RDN, they should not

provide individualized nutrition interventions, but limit their actions to those outlined in Figure 1. The US Registry of Exercise Professionals lists many members who maintain an exercise certification accredited by the National Commission for Certifying Agencies,<sup>22</sup> and actively credentialed individuals must maintain compliance with their certifying body's standards of practice and professional performance and code of ethics.<sup>22</sup>

Health coaching, a relatively new domain within health, fitness, and nutrition, includes certifications from reputable organizations such as the Certified Health Coach from ACE<sup>19</sup> and the National Board Certified Health & Wellness Coach from the National Board for Health & Wellness Coaching.<sup>28</sup> Health coaches utilize evidenced-based information to help clients achieve health behavior changes, as opposed to recommending specific exercise or

nutrition programming. Certified health coaches should only provide lifestyle interventions within their scope of practice (Figure 1).<sup>16</sup>

### Health Education and Promotion Compared With Individualized Interventions

A distinction must be made between discussing and *counseling or coaching* clients on nutrition, physical activity, and behavior change. The Food is Medicine and Exercise is Medicine projects describe the need to promote access to healthy foods and physical activity through multiple channels to reduce disease burden,<sup>29,30</sup> which includes collective promotion by RDNs, exercise practitioners, and health coaches. However, although providing nutrition and/or physical activity education provides some benefits, client-centered interventions such as personalized programming can truly improve health and fitness-related outcomes, and these must be provided within the practitioners' scope of practice.<sup>15,31</sup> A personal trainer who does not address nutrition or an RDN who does not discuss physical activity to any extent provides a disservice to their client. Conversely, a personal trainer who creates a meal plan or an RDN who creates an exercise program for a client is practicing outside of their scope. Both nutrition and physical activity are integral aspects of health and well-being, and nutrition and exercise practitioners should ideally collaborate to provide comprehensive, individualized programming in both of nutrition and physical activity when possible.

### Referrals and Creating an Interprofessional Network

When a client's questions or goals surpass a practitioner's scope of practice, or if the client desires, the practitioner should refer that client to a complementary practitioner with necessary specialization.<sup>7,18</sup> Developing and maintaining an interprofessional collaborative practice (IPCP) allows practitioners to provide clients with multicomponent treatment plans while staying within scope of practice.<sup>18</sup> Establishing strong IPCP networks can also allow practitioners to connect their clients from diverse cultures and groups to practitioners who specialize in

meeting their specific needs. An IPCP network can include medical doctors, mental health counselors, physical therapists, psychologists, social workers, and nurses, among others. When deciding how and to whom to refer a client, practitioners should consider the client's specific circumstances, priorities, and preferences. Collaborating practitioners ought to maintain communication about the client's needs and intervention plans and work together to help the client achieve their nutrition and exercise goals.<sup>7</sup> The most effective interventions may include programming from separate, credentialed practitioners, to provide individualized counseling or coaching across multiple domains (Figure 2).

### Practice Implications

Clear delineations exist for providing care within respective scopes of practice. Promoting healthy nutrition and adequate physical activity is the responsibility of all nutrition and exercise practitioners, but practitioners should refrain from providing plans or programming outside of one's field. Navigating interventions overlapping multiple fields may require referral to interprofessional colleagues, depending on the client and situation. Particularly for topics lacking evidence-based guidelines, practitioners should have a low threshold for referrals. Examples of health and fitness topics that may inherently require an IPCP include weight management (for weight loss or gain), nutrient timing (including time-restricted eating), and periodization strategies (exercise intensity manipulations). Although it may seem that either an exercise or nutrition practitioner could address these topics, collaboration can facilitate optimal nutrient intake and exercise programming to meet health and fitness goals. Delivering interventions with an IPCP ensures that practitioners deliver interventions within their scope while comprehensively supporting a client's holistic health and well-being.

## CLIENT-CENTERED COMMUNICATION AND GOAL SETTING

### Effective Communication

A practitioner's ability to connect and communicate effectively with a client

is equally important to their education and technical skills. Utilizing motivational interviewing techniques during consultations supports effective client communication and helps practitioners fully understand their client's strengths, prior successes, and current limitations. Combining motivational interviewing with tactics like the ACE's ABC Approach can create open and authentic dialogue with clients.<sup>32</sup> Key tenants of these approaches include:

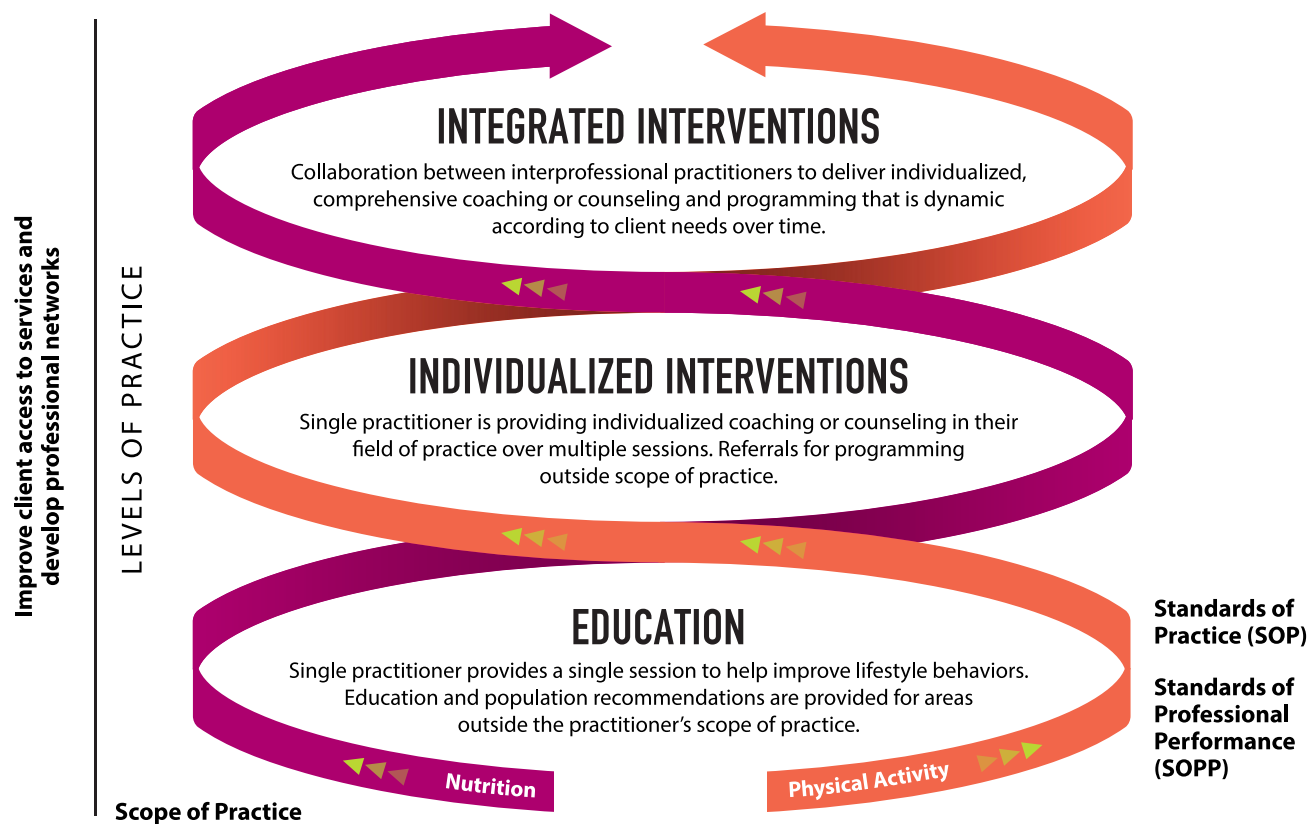
- Collaboration between the client and practitioner to actively engage in shared decision-making;
- Exploring clients' motivations and ambivalence to change by asking open-ended questions;
- Supporting self-efficacy by identifying and addressing barriers and developing strategies and solutions to overcome these barriers;
- Setting realistic goals, creating action plans, and finding creative workarounds for obstacles; and
- Practicing empathy, unconditional positive regard, collaboration, and rapport building.<sup>33</sup>

Although practitioners best understand the topic content, clients have expertise on themselves. Nutrition and exercise practitioners should aim to understand a client's social determinants of health, including body diversity, physical and mental capabilities or limitations, and how each client interacts with their daily environments, to help guide interventions. By continually being present with clients and mastering effective communication skills, practitioners can enhance their clients' engagement, empowerment, and success toward achieving their health goals.

### Goal Setting

Individualizing interventions according to client needs and circumstances facilitates healthy behaviors.<sup>15,34,35</sup> Collaborative goal setting provides clients with motivation and a sense of empowerment, ultimately leading to improved health outcomes and long-term behavior change. Client priorities may include but are not limited to positive health habits, metabolic health and energy balance, nutrient adequacy and hydration, and well-being (Figure 3),<sup>7</sup> and these will vary





Adapted from the Dietetics Career Development Guide.

For more information, please visit [www.eatrightPRO.org/futurepractice](http://www.eatrightPRO.org/futurepractice)

**Figure 2.** Advanced practice and collaboration when providing nutrition and physical activity interventions to adults in the general population. Adapted from reference 31.

between and within individuals over time. When practitioners have limited time for screening, assessment, and counseling or coaching, choosing a single priority may generate positive inertia and the best initial outcomes. Even establishing a very generalized goal or shifting stage of change, such as "I will start thinking about how foods affect my health/mood" (ie, moving from precontemplation to contemplation) may be appropriate for early consultations.

### Practice Implications

Practitioners can make clients feel more at ease by offering an accessible and inclusive physical or virtual meeting space and by using person-first language and preferred pronouns. Effective interventions require counseling or coaching with dynamic client interactions, using a client's knowledge as a starting point to facilitate behavior

change. Nutrition and exercise practitioners may, in fact, provide little expertise during consultations and instead help clients figure out answers for themselves (ie, employ motivational interviewing techniques). A client's priorities might misalign with the practitioner's or with the greater nutrition and exercise communities', but practitioners have the responsibility to prioritize a client's needs and preferences while providing objective, evidence-based information. Approaching clients' circumstances with an open mind facilitates understanding client needs and potentially effective solutions.

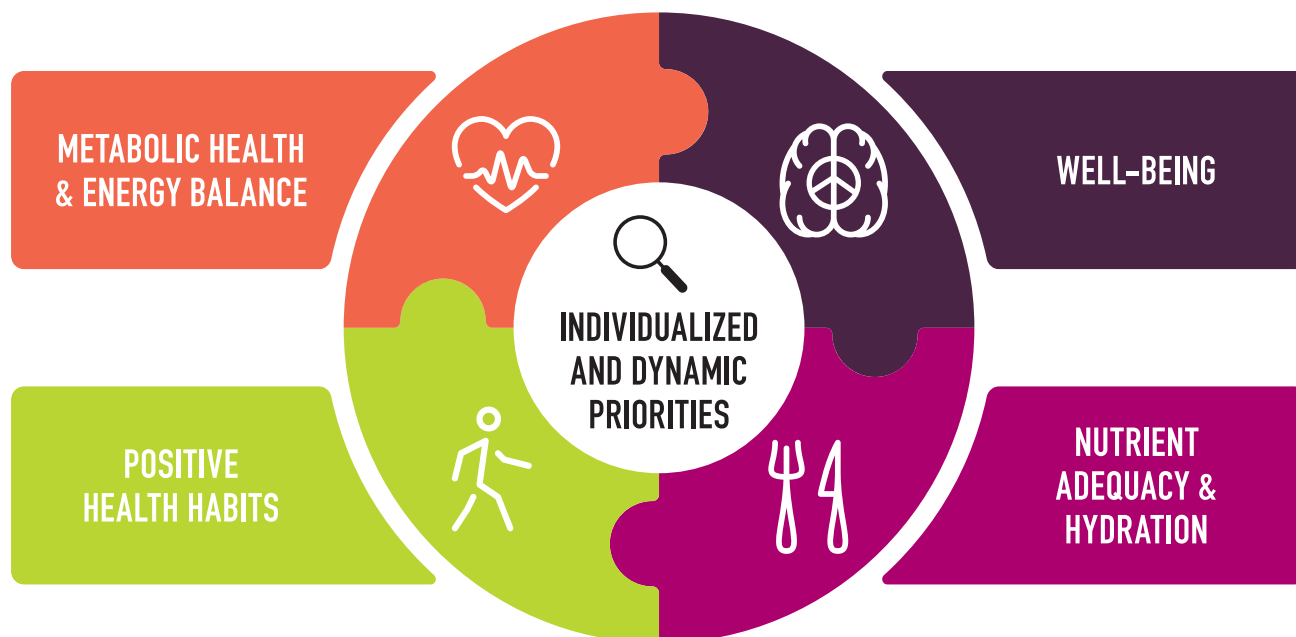
Practitioners can build and maintain a client's trust and comfort by respecting the client's interests and developing goals together. For example, some clients with overweight or obesity do not wish to focus on weight loss, and asserting body weight change as a primary goal may weaken

trust and create discomfort. However, if a client has uncertain weight goals, an opportunity arises to share evidence about potential benefits and obstacles of various weight management strategies.<sup>36</sup> As another example, clients often have personal goals to return to a fitness level they achieved in their past, although life circumstances have changed. Practitioners can help such clients shape realistic goals by having empathetic discussions and using motivational interviewing techniques. [Figure 4](#) provides an example of client-centered communication.

### IMPROVING ACCESS TO AND PAYMENT FOR DISEASE PREVENTION SERVICES

Several barriers prevent clients from initiating or continuing preventive care from a qualified practitioner, such as time, cost, transportation, child care, access to technology, abilities, language,

## Individualize Priorities Based on Comprehensive Assessment and Adapt Interventions to Meet Changing Needs



**Figure 3.** Priorities for interventions provided by nutrition and exercise practitioners for adults who are healthy or have cardiometabolic risk factors. Reprinted with permission from reference 7.

and comfort level with the practitioner and intervention. Practitioners should actively help mitigate these barriers to improve access to effective care. Public and private payer coverage for nutrition and physical activity interventions for disease prevention is lacking, and financial costs may play a significant role in an individual's willingness or ability to utilize services.<sup>37,38</sup>

### Practice Implications

Methods to improve accessibility to nutrition and physical activity services include flexible delivery methods, cost-effective options, and advocacy and legislation for private and public payer coverage (Figure 5). Practitioners should identify methods to address hearing or visual impairments or language barriers that could influence in-person or telehealth consultations. Practitioners must also tailor educational resources to the client's culture, language, socioeconomic status, and abilities as much as possible and understand the client's social determinants of health to improve access to care. Providing web or telephone-

based remote consultations and following up via text messaging or email can also improve accessibility of services, although initial in-person consultations are preferred, when feasible.<sup>7</sup> Because telehealth guidelines vary by state, practitioners should make themselves aware of their regional policies and restrictions.<sup>39</sup> Ideally, practitioners should collaborate with each client to determine a realistic frequency, quantity, and type of contact that will best serve the client, which should consider the client's ability or willingness to pay for services.

To make services more affordable, nutrition and exercise practitioners may consider offering packages with multiple contacts or collaborating to offer interprofessional packages with less total expense compared with singly offered services. In addition, practitioners may provide group sessions with less expense to clients or offer payment plans. Practitioners should openly communicate payment options to clients and encourage them to pursue resources that may cover nutrition and physical activity

interventions, such as private and public payers, workplace benefits, and community resources.<sup>7</sup> Eligible practitioners should understand billing practices and coding to receive payment for interventions from public or private payers whenever possible. For example, public or private payers may cover services from a nutrition or exercise practitioner for adults with obesity or prediabetes. Enrolling as providers through public and private payers and obtaining a National Provider Identifier can facilitate payment for services.

Nutrition and exercise interventions should extend beyond the consultation office and gym, respectively. Practitioners should support community programs and legislation that focus on simple environmental adjustments that can have remarkable results, such as produce prescriptions and replacing highly processed foods at small grocery stores with enticing, strategically placed fruits and vegetables.<sup>40-42</sup> Although nutrition and exercise practitioners can work within their own practices to address some barriers to access for individual

|   |
|---|
| <b>Background</b>   |
| Sarah is a 35-year-old woman who has been struggling with her weight for several years. She has a sedentary lifestyle, lacks energy, and often feels self-conscious about her appearance. Sarah is aware of the importance of exercise and healthy eating but has been unable to make consistent changes to her habits.   |
| <b>Practitioner:</b> Hi Sarah, it's great to see you today. How have things been going since our last session?  |
| <b>Sarah:</b> Well, to be honest, I haven't made much progress. I still find it difficult to stick to an exercise routine, and my eating habits haven't really changed.   |
| <b>Practitioner:</b> I appreciate your honesty, Sarah. It sounds like making lasting changes in your lifestyle has been challenging. Can you tell me a bit more about your experiences with exercise and healthy eating?  |
| <b>Sarah:</b> It's just hard for me to find the time and motivation to exercise regularly. I often feel tired after work, and there are so many other things demanding my attention. And when it comes to food, I tend to turn to unhealthy snacks when I'm stressed or bored.  |
| <b>Practitioner:</b> I understand that finding time and motivation can be tough, especially with a busy schedule. It sounds like stress and boredom play a role in your eating habits. On the one hand, you want to make healthier choices, but on the other hand, stress and boredom lead you to seek comfort in less nutritious foods. Is that right?   |
| <b>Sarah:</b> Yes, exactly. It's like a never-ending cycle.   |
| <b>Practitioner:</b> I can see how that cycle can be frustrating. What would you say are some reasons why you'd like to improve your exercise routine and make healthier food choices?  |
| <b>Sarah:</b> Well, I want to feel better about myself, have more energy, and be able to keep up with my kids. I also know that taking care of my health is important in the long run.  |
| <b>Practitioner:</b> Those are all meaningful reasons, Sarah. It sounds like you value your well-being and want to be more present and active in your life. If we were to envision your life with healthier habits, what are some small steps you think you could take toward that goal?  |
| <b>Sarah:</b> Maybe I could start by going for short walks during my lunch break and substituting unhealthy snacks with healthier options like fruits or nuts.  |
| <b>Practitioner:</b> Those sound like achievable steps, Sarah. Walking during your lunch break is a great way to incorporate physical activity into your day and choosing healthier snacks can make a positive impact on your nutrition. How confident do you feel about making these changes on a scale of 0 to 10, with 0 being not confident at all and 10 being very confident?                         |
| <b>Sarah:</b> I'd say about a 7. I think I can give it a try.   |
| <b>Practitioner:</b> That's a great start, Sarah. Remember, I am here to support you every step of the way. As you implement these changes, we can revisit your progress and explore any challenges you might face. Together, we'll work towards building a healthier and more fulfilling lifestyle.  |
| In this scenario, the practitioner uses motivational interviewing techniques such as reflective listening, evoking the client's own reasons for change, and exploring small achievable steps. The practitioner supports Sarah in identifying her motivations, acknowledging her challenges, and working collaboratively toward setting realistic goals that align with her values and readiness for change. |

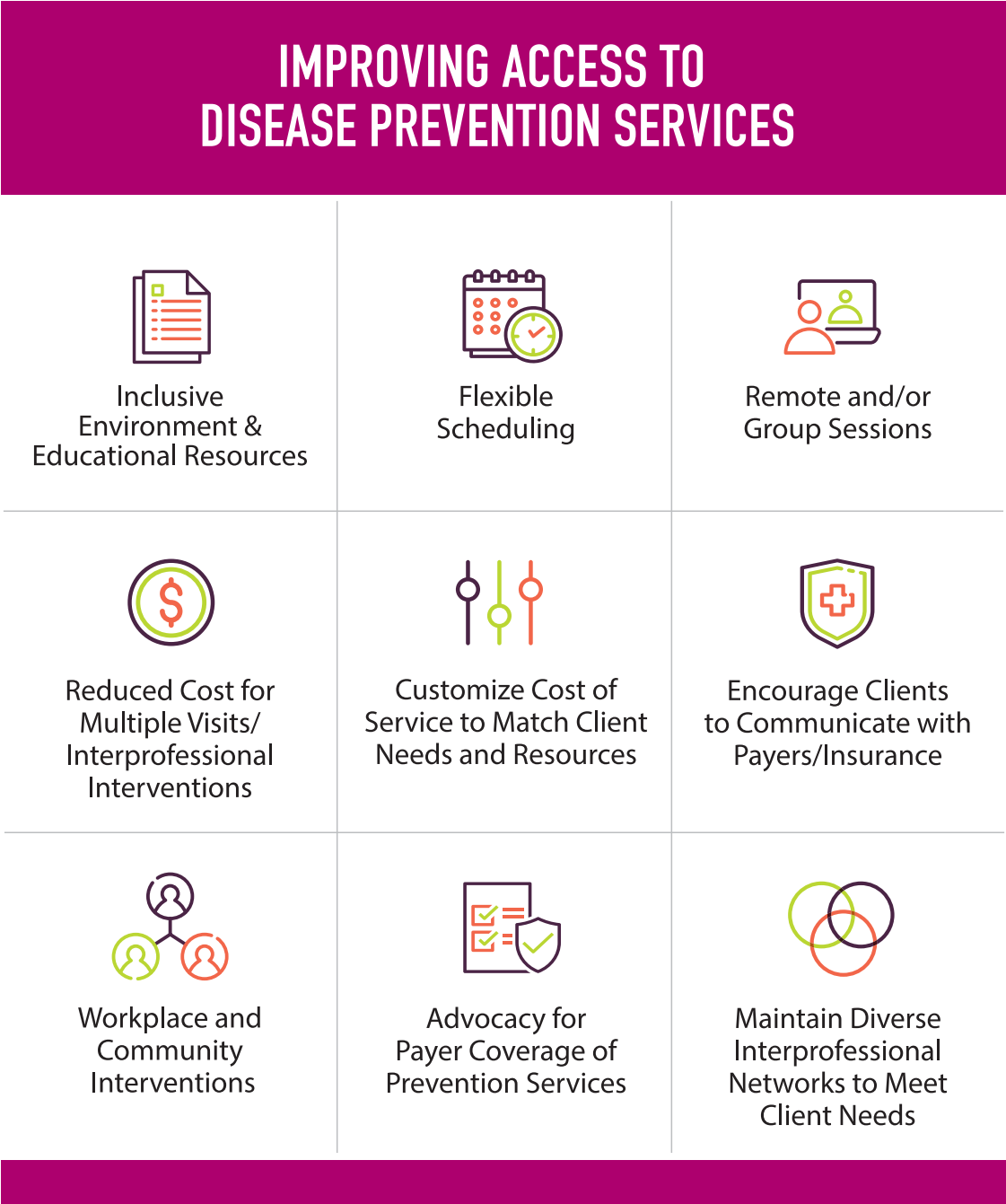
**Figure 4.** Dialogue demonstrating client-centered communication and goal setting for a nutrition and physical activity intervention.

clients, collective action from policy-makers, public and private payers and other health care practitioners are needed to improve access on a population level. All health practitioners should view improving access to nutrition and physical activity interventions provided by qualified practitioners as a long-term, global health care investment strategy.<sup>7</sup>

### THE FUTURE OF PROVIDING NUTRITION AND PHYSICAL ACTIVITY INTERVENTIONS

Technological advances both in and outside of the health and fitness fields will undoubtedly change how nutrition and exercise practitioners interact with clients and other health practitioners. At the time of this publication, artificial

intelligence and *omics* technologies (eg, metabolomics, microbiomics, genomics) are 2 methodologies reshaping how users learn and how practitioners educate, counsel, and coach. Rather than resist changes and double down on current or historical practices, nutrition and exercise practitioners should embrace change and learn how to best



**Figure 5.** Methods to improve access to nutrition and physical activity services provided by qualified nutrition and exercise practitioners for adults in the general population.

maintain an evidence-based practice while utilizing emerging science and technologies. Seeking continuing education and information about such technologies can help practitioners maintain relevance and marketability while providing exceptional, individualized care, which may involve partnering with specialists such as genetic

counselors or physicians. Evidence-based, targeted metabolomics or nutrigenomics tests coupled with various learning tools may enable practitioners to apply emerging precision nutrition practices.<sup>43</sup> Further, better understanding how humans interact with our internal and external environments, such as influences of the gut microbiome,

gut-brain axis, and endocrine disrupting chemicals, among others, will shape research methodologies and health-improvement practices. Regardless of technological or medical advances, personal connection and interaction remain paramount for improving health and fitness and decreasing disease and injury risk.



The systematic review and EBPG supporting this Position Paper were novel in exploring how to best deliver nutrition and physical activity interventions in combination, including using an interprofessional team. Future, related research can focus more on the interaction among nutrition and exercise interventions and the influence of these interventions in combination with medical interventions, such as obesity medications. Furthermore, research should seek to better understand and address the influences of life and occupational stressors, such as environmental, social, cognitive, and metabolic stressors on health and well-being.

## CONCLUSIONS

Effective, multicomponent programming requires tailored education and dynamic counseling or coaching provided by qualified practitioners within their scope of practice. A team approach that develops and maintains an IPCP is crucial to effective health improvement and maintenance. Practitioners who excel in their field understand the multidimensional and dynamic aspects of screening, assessment, interventions, and referrals. They learn to work with clients to manage more than just the physiological, biochemical, and behavioral aspects of health, and also address the nuances of diverse client backgrounds, influence of total stressors, and interactions of interventions. Only collective action will increase access to individualized services to prevent disease and improve health and well-being on a population level.

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## STATEMENT OF POTENTIAL CONFLICT OF INTEREST

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J. Robinson, E. Nitschke, A. Tovar, K. Gottesman, P. Hamlett, and L. Mattar served as content experts and M. Rozga served as the methodologist and project manager. All authors drafted portions of the Position Paper and approved of the final manuscript.