Now Is the Time to Implement Physical Activity Counseling in Clinical Practice—A New Universal Tool

It has been more than 25 years since the first US Surgeon General’s report *Physical Activity and Health*. Since that report, the research evidence has continued to mount related to the importance of physical activity (PA) as a key contributor to health and well-being. Updated physical activity guidelines have been published in many countries and by the World Health Organization. Unfortunately, despite the well-established evidence and public health messaging promoting PA, rates of participation have not improved, and physical inactivity remains a major risk factor for the development of most chronic diseases.

In this issue of the *Proceedings*, Nauman et al³ provide additional evidence for the powerful impact that PA has in reducing mortality, in this case in a middle-income country. Data were analyzed from 443,492 healthy adults (30 to 79 years of age) in the China Kadoorie Biobank study. They used a tool (Physical Activity Intelligence [PAI]) that has the potential to be universally used to aid in tracking PA and as motivation for individuals to achieve healthy levels of PA. One of the principal features of PAI is that it specifically accounts for the intensity of PA. Individuals who achieve higher heart rates during PA throughout the day, relative to their age, sex, and resting heart rate, will have a higher PAI score.

A recently published cohort study of more than 400,000 adults from the National Health Interview Survey reported similar findings that vigorous-intensity PA is associated with lower all-cause mortality.² Both of these studies reported that their findings were consistent among sociodemographic characteristics, baseline chronic conditions, and presence of lifestyle risk factors, suggesting generalizability across multiple personal and social domains.

An extensive body of literature supports the cardiometabolic benefits achieved in performing higher intensity PA in short bouts. Evidence of the cardiometabolic benefits of higher intensity activity (improvement in cardiorespiratory fitness [VO₂max], body composition, blood glucose regulation, and resting blood pressure) is present in apparently healthy individuals and those with cardiometabolic diseases (specifically type 2 diabetes, heart failure, post—heart transplant, and cardiovascular disease).³ In a practical sense, individuals could achieve this level of PA by performing a few activities each day at a vigorous intensity, for example, by purposefully doing an activity like stair climbing 3 times a day for about 5 minutes each time.

A key attribute of PAI that makes it potentially of universal use is that it can use most types of heart rate monitors that are available on many wrist-worn devices. In addition, it can sync to an app that is likewise available on most smart devices. Users get immediate feedback on their PAI score, which is updated daily and uses a 7-day rolling average. This monitoring provides feedback on activities in all domains (occupational, transportation, domestic, and recreational), which breaks the mold of the traditional exercise prescription model. Individuals can identify common tasks they perform (eg, house or yard work) or recreational activities, such as playing tennis or dancing, that may produce a higher PAI value.

Although many factors have been associated with inactivity, an individual’s perceived lack of time remains the primary barrier to performing sufficient PA. A clear benefit of high-intensity PA is that health benefits can
be achieved in a shorter amount of time. Interestingly, the value-added benefits of high-intensity PA were recognized in the updated exercise statement for patients with type 2 diabetes. Specific recommendations included high-intensity strength training exercises and intervals or short bouts of aerobic exercise throughout the day.4

Whereas most modifiable cardiovascular disease risk factors are routinely discussed in clinical settings, including blood pressure, cholesterol level, weight, smoking, and blood glucose, PA is rarely assessed, despite a push from the American Heart Association advocating for the assessment of cardiorespiratory fitness as a vital sign.5 Clinicians often cite time restraints, lack of financial reimbursement, poor health care system support, disbelief that PA counseling will make a difference, and scarcity of community resources as barriers to recommending PA. In addition, survey data suggest that there has been little or no improvement of health care provider–initiated PA assessment during the past decade, which is unacceptable, given the well-known benefits of PA and exercise.

How can busy health care providers overcome these significant barriers and improve patient care? First, they must prioritize assessment of PA at each visit along with other lifestyle modifications.6 Attainable PA goals and exercise prescriptions should be discussed and reassessed at follow-up appointments. If PA goals are not met, patients should be encouraged to increase the duration or frequency of PA and be reminded that even light-intensity PA is associated with reductions in cardiovascular disease.7 Wearable activity monitors have also become commonplace and serve as an excellent resource to gauge PA levels among patients. If time is a limitation, clinicians can use their allied health colleagues, including clinical exercise physiologists, nurses, physical therapists, nutritionists, and other fitness professionals, to engage in the assessment and promotion of PA. To better incentivize physicians, they can “bill for time,” which includes all aspects of the patient visit, including discussion on healthy lifestyle behaviors.6 Health care providers should also educate themselves on local health and well-being centers in their communities, such as universities, community centers (eg, YMCA, park districts), and fitness centers, so that appropriate referrals can be made during clinic visits, additionally being prepared to suggest apps (such as the PAI app and others that offer multidomain lifestyle tracking, many for free) and online resources (for instance, exercise videos, including many with free interval training workout videos for children to seniors and for all fitness levels) specific to the patient’s exercise needs and goals.

Frankly, the time has come for clinicians to employ PA as a vital sign that is routinely assessed, as Sallis et al8 have previously suggested. Although statements, recommendations, and guidelines were developed only in the past 25 years, the evidence for the clinical relevance of PA has existed in the medical literature for a much longer time. The classic work by Morris et al9 reported in the Lancet in the 1950s demonstrated the protection from coronary artery disease by active workers (bus conductors and postmen) compared with their sedentary colleagues (bus drivers and telephonists). Now, in the current pandemic, data have shown that physical inactivity may increase the risk of both hospitalization and admission to intensive care units.10 Once assessed, encouraging sufficient PA on a regular basis is one of the most important recommendations that can be made for all individuals to receive health benefits. The method used by Nauman et al1 has great potential as a universal tool in this effort to assess and to promote PA.

Leonard A. Kaminsky, PhD
Ball State University
College of Health
Fisher Institute of Health and Well-Being
Muncie, IN
Healthy Living for Pandemic Event Protection (HL-PIVOT) Network
Chicago, IL
Potential Competing Interests: The authors report no competing interests.

Correspondence: Address to Leonard A. Kaminsky, PhD, Ball State University, College of Health, Fisher Institute for Health and Well-Being, Muncie, IN 47304 (kaminskyla@bsu.edu).

ORCID
Leonard A. Kaminsky: https://orcid.org/0000-0001-5736-9106

REFERENCES