


**COPE Webinar for Health Professionals**

**FEEDING THE NEED  
DEVELOPING SOLUTIONS**



**Promoting Physical Activity and Cardiovascular Health in Clinical Practice**  
Wednesday, December 7, 2022

Moderator  
Lisa Diewald, MS, RDN, LDN

Program Manager  
MacDonald Center for Obesity Prevention and Education  
Villanova University M. Louise Fitzpatrick College of Nursing

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**Finding Slides for Today's Webinar**

Go to [villanova.edu/cope](http://villanova.edu/cope)  
Go to "Webinars"

Locate Bethany Barone Gibbs, PhD  
webinar description page  
for pdfs of today's slides

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## Continuing Education Credit Details

- Villanova University M. Louise Fitzpatrick College of Nursing is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation.
- Villanova University College of Nursing Continuing Education/COPE is a Continuing Professional Education (CPE) Accredited Provider with the Commission on Dietetic Registration.



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## Continuing Education Credit Details

- This activity has been approved for 1.0 CH or 1.0 CPEU for nurses and dietitians.
- To receive CE credit, you must attend the entire program.
- All nurses must complete an evaluation following the program.
- Level 2
- CDR Performance Indicators: 6.2.3, 8.2.4, 8.3.1, 9.2.4



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## Today's Learning Objectives

- Summarize current physical activity guidelines.
- Identify effects of physical activity on blood pressure, cholesterol, and cardiovascular health.
- Learn brief assessment and behavior change strategies for physical activity promotion in clinical settings.



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**Promoting Physical Activity and Cardiovascular Health in Clinical Practice**



Bethany Barone Gibbs, PhD  
Chair and Associate Professor  
Department of Epidemiology and Biostatistics  
West Virginia University  
School of Public Health

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### Disclosures

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There are no relevant financial relationships with ineligible companies for those involved with the ability to control the content of this activity.

The planners will review participant feedback to evaluate for real or perceived commercial bias in any activity.

CDR members: Any feedback about the quality of the activity can be sent directly to CDR at [QualityCPE@eatright.org](mailto:QualityCPE@eatright.org)

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### Conduct Expectations

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All participants are expected to demonstrate respect, constructive dialogue, civility, and professionalism in all communication, and refrain from demeaning, discriminatory, or harassing behavior and speech.

COPE reserves the right to take any action deemed necessary and appropriate, including immediate removal from the meeting space without additional warning or refund, in response to any incident of unacceptable behavior. COPE reserves the right to prohibit attendance at any future COPE events, virtually or in person.



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## Promoting Physical Activity and Cardiovascular Health in Clinical Practice

Bethany Barone Gibbs, PhD  
Gibbs Physical Activity and Sedentary Behavior Research Lab  
Chair and Associate Professor  
Department of Epidemiology and Biostatistics  
West Virginia University



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### Gibbs Sedentary Behavior & Physical Activity Research Lab

Epidemiologist specializing in physical activity/sedentary behavior, lifestyle intervention, and cardiovascular health



Bethany Barone Gibbs, PhD  
Chair & Associate Professor  
Epidemiology & Biostatistics



Effect of Reducing Sedentary Behavior on Blood Pressure: 3-month RCT (R01 HL134809); RESET Sleep Ancillary Trial (R01 HL147610)  
Role: Principal Investigator (Co-I on Sleep Ancillary)



Reducing sedentary behavior in pregnancy: a randomized pilot and feasibility trial (American Heart Association 20TPA35490099)  
Role: Principal Investigator



Sedentary behavior, physical activity, sleep, and cardiovascular risk in pregnancy: the Pregnancy 24/7 cohort study (R01 HL153095); Offspring Study (R01 HL164662)  
Role: West Virginia site Principal Investigator/Co-PI



Sedentary behavior and cardiovascular health in young women (R01 HL158652)  
Role: Principal Investigator

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### AHA SCIENTIFIC STATEMENT

## Physical Activity as a Critical Component of First-Line Treatment for Elevated Blood Pressure or Cholesterol: Who, What, and How?

A Scientific Statement From the American Heart Association

Bethany Barone Gibbs, PhD, FAHA, Chair; Marie-France Hivert, MD, MMSc; Gerald J. Jerome, PhD, FAHA; William E. Kraus, MD, FAHA; Sara K. Rosenkranz, PhD; Erica N. Schorr, PhD, RN; Nicole L. Spartano, PhD; Felipe Lobelo, MD, PhD, FAHA, Vice Chair; on behalf of the American Heart Association Council on Lifestyle and Cardiometabolic Health; Council on Cardiovascular and Stroke Nursing; and Council on Clinical Cardiology

Dempsey, et al. Hypertension. 2018

Hypertension. 2021

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**Physical Activity Guidelines for Americans**  
2nd edition

- $\geq 150$  min/week of moderate intensity
- $\geq 75$  min/week of vigorous intensity
- $\uparrow$  duration or  $\uparrow$  intensity related to greater health benefits

- 2 times/week
- Involve all major muscle groups
- Moderate intensity or greater

**Aerobic Exercise**

**Resistance Exercise**

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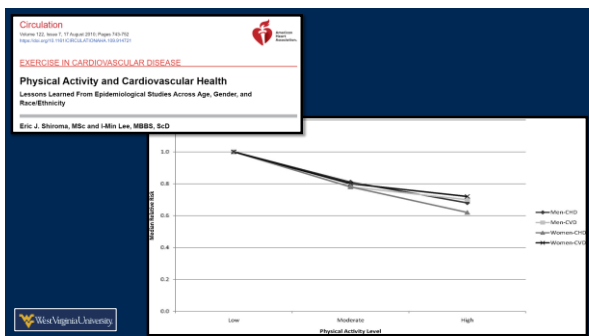
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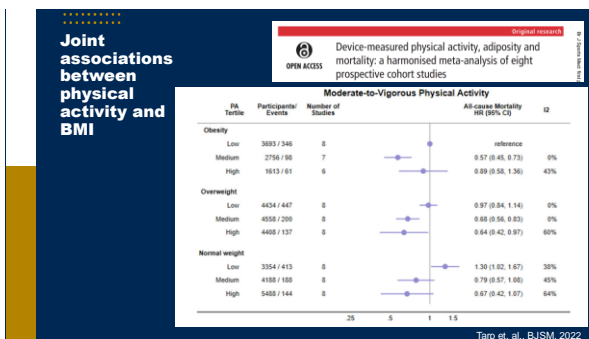
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## ANA SCIENTIFIC STATEMENT

### Physical Activity as a Critical Component of First-Line Treatment for Elevated Blood Pressure or Cholesterol: Who, What, and How?

**Table 2. Average Effect Sizes of Physi**

Table 2. Average Effect Sizes of Physical Activity and Other Lifestyle-Only Treatments on Blood Pressure and Blood Cholesterol

Lifestyle modification	Average effect on blood pressure		Average effect on blood cholesterol and triglycerides		
	SBP (mmHg)	DBP (mmHg)	LDL-C (mg/dL)	HDL-C (mg/dL)	TG (mg/dL)
Physical activity					
Aerobic <sup>14</sup>	-4	-3	-3 to -4	+1 to +2	-4 to -12
Dynamic resistance <sup>15,16</sup>	+2	—	—	—	-8
Combined <sup>14</sup>	-3	-3	—	—	—
Weight loss <sup>17</sup>	-3	-2	-5	+2 to +3	-15
Dietary modifications					
DASH and DASH-style diets <sup>18</sup>	-5	-3	-4	—	—
Mediterranean diet <sup>19</sup>	-3	-2	—	—	—
Smoking cessation <sup>20,21</sup>	—	—	—	+4	—
Alcohol moderation (2 drinks/d) <sup>22,23</sup>	-3	-3	—	—	—

— indicates nonsignificant effect, not recommended, or insufficient evidence to draw conclusions; DASH, Dietary Approach to Stop Hypertension; DBP, diastolic blood pressure; HDL-C, high-density lipoprotein cholesterol; LDL-C, low-density lipoprotein cholesterol; SBP, systolic blood pressure; and TG, triglyceride.

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### Effects across Baseline Levels

### Aerobic Training on SBP

Normotensive: -2 mmHg

Prehypertensive: -4 mmHg

Downloaded from <http://ajph.org/>

### Frequency, Intensity, & Duration

Acute effect of aerobic exercise = -2 to -12 mmHg

### Variable Response

Some respond more favorably

- ~10% are non-responders or have adverse/paradoxical responses

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## What's New

## Science-based updates to guidelines



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### Key Guidelines for Adults

- ✓ **Adults should move more and sit less throughout the day.** Some physical activity is better than none. Adults who sit less and do any amount of moderate-to-vigorous physical activity gain some health benefits.



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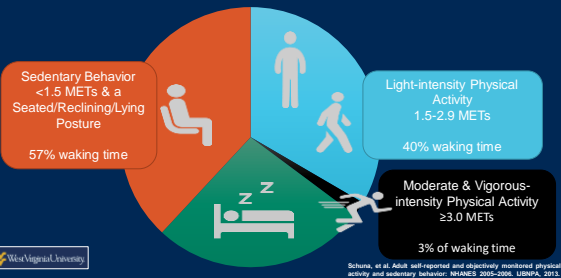
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### 24-hr Activity Cycle

Rosenberger, et. al., the 24-Hour Activity Cycle: A New Paradigm for Physical Activity, Medicine & Science in Sports & Exercise, March 2019 - Volume 51 - Issue 3 - p 454-464



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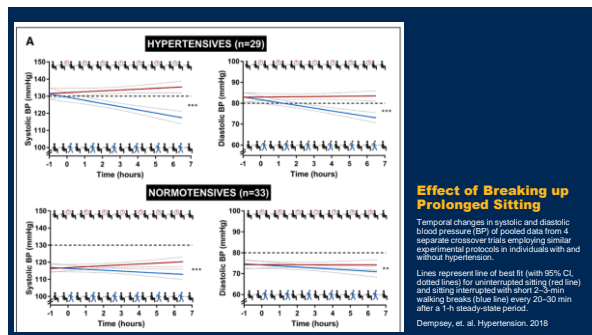
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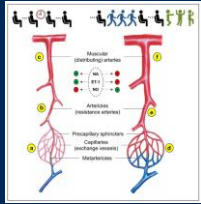
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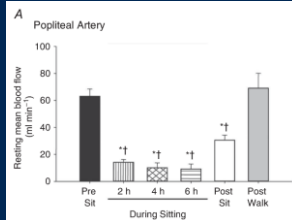
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## Sitting too long decreases circulation and vascular function in the legs

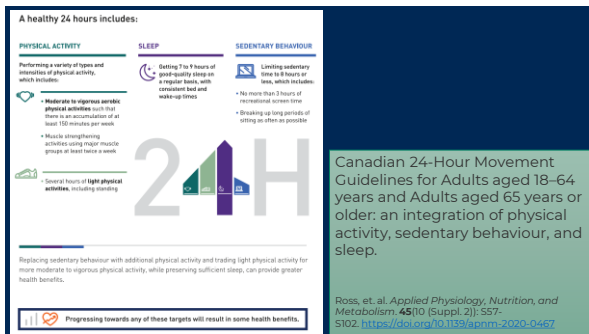


Dempsey, et al. Hypertension, 2018



Restano et al., Experimental Physiology, 2015

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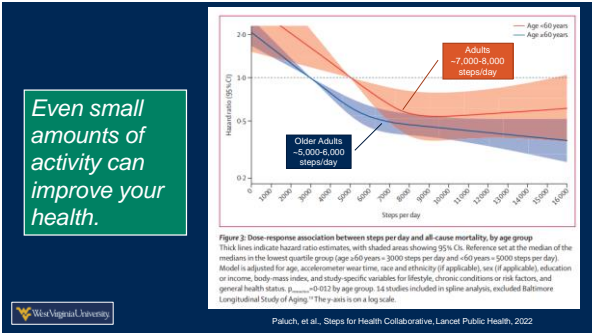
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**Key Guidelines for Adults**

- ✓ Adults should move more and sit less throughout the day. Some physical activity is better than none. Adults who sit less and do any amount of moderate-to-vigorous physical activity gain some health benefits.

[https://health.gov/paguidelines/second-edition/pdf/Physical\\_Activity\\_Guidelines\\_2nd\\_edition.pdf#page=55](https://health.gov/paguidelines/second-edition/pdf/Physical_Activity_Guidelines_2nd_edition.pdf#page=55)

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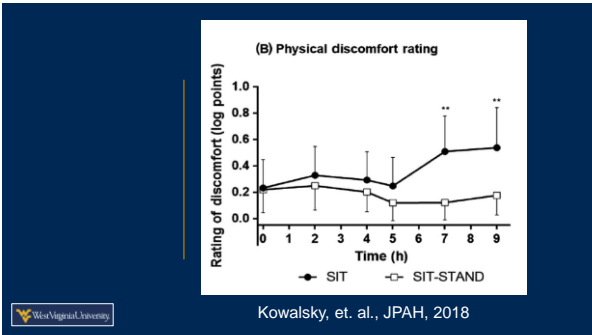
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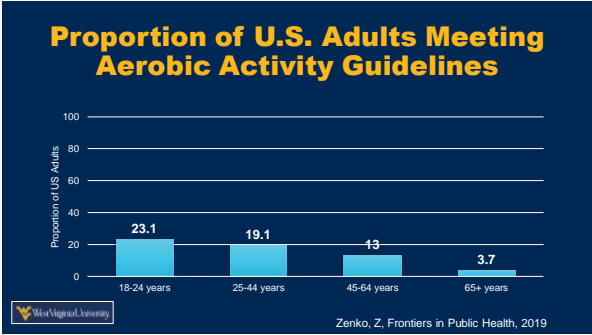
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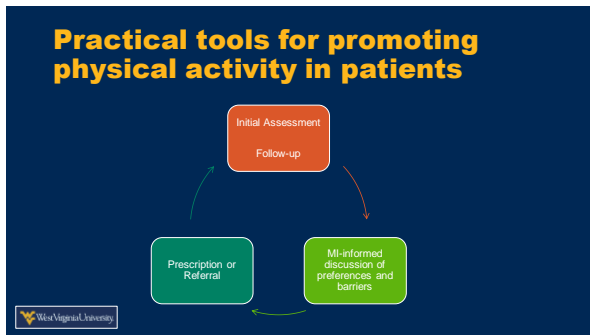
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## Assessment

**Self-Report (e.g., Physical Activity as a Vital Sign)**

- Question 1: On average, how many days per week do you engage in moderate to strenuous exercise (like a brisk walk)?
- Question 2: On average, how many minutes do you engage in exercise at this level?

**Minimum Aerobic Guidelines**

Walking (moderate): 150 min/week or 20-30 min/day

Running (vigorous): 75 min/week or 25 min/day x 3 times/week

**Wearables**

- Can we look at how many steps you got over the last week?
- How many steps do you usually get on a day that wear your monitor?

**Minimum Steps**

~7,000 steps/day

\*At lower levels, +1000 steps per day has benefits!

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## Inviting a Conversation about Activity

**Gauging readiness to change**

**Meeting patients where they are**

**Addressing barriers**

Physical activity can help control your blood pressure. Is increasing activity something you are interested in working on?

What are some activities you have enjoyed in the past?

Starting small is great and can have real health benefits! How might you be able to add 10 minutes of walking each day?

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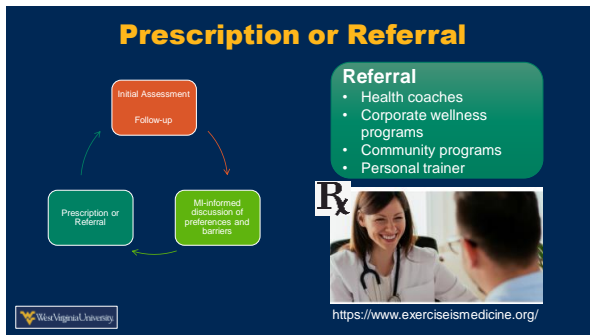
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**HCP Action Guide**

- English (PDF)
- Arabic (PDF)

**Provider Materials**

- EIM Summary Sheet (PDF)
- Supporting Tools (Web Link)

**Patient Handouts**

- EIM Rx for Health Series (Web Link)
- Prescription Form (PDF)

<https://www.exerciseismedicine.org/eim-in-action/health-care/health-care-providers/>

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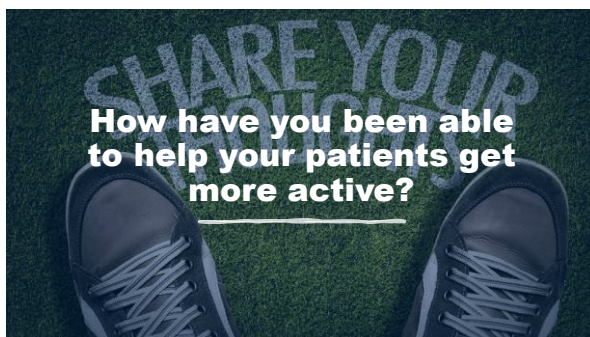
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### To Receive Your CE Certificate

- Look for an email containing a link to an evaluation. The email will be sent to the email address that you used to register for the webinar.
- We encourage you to provide feedback so we can continue to improve program offerings
- Complete the evaluation soon after receiving it. It will expire after 3 weeks. Nurses must complete the evaluation before receiving the CE certificate.
- You will be emailed a certificate within 5 business days.

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### Upcoming Event: New Date! Precision Counseling

Thursday, March 9| 9 am - 2 pm  
The Inn at Villanova  
In-person. Interactive. Inter-professional.  
4 CPEUs for Dietitians; 4 CH for Nurses

Personalized care and "meeting the patient where they are at" requires you to present all treatment options in an unbiased way and allow the patient to determine what works best for them. Personalized care utilizes the **Shared Decision-Making Process**. Learn how to counsel using this systemized process and develop a decision tool to use in your future practice.

For more information scan QR code or visit  
[Bit.ly/COPEshareddecisionmaking](https://bit.ly/COPEshareddecisionmaking)



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# Q&A



Moderator:  
Lisa Diewald, MS, RDN, LDN  
[cope@villanova.edu](mailto:cope@villanova.edu)

If you are an RD or RDN and have any questions or concerns about this continuing education activity,  
you may contact CDR directly at [QualityCPE@eatright.org](mailto:QualityCPE@eatright.org).



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