PATIENT HANDBOOK

Updated: September 2026



Diabetes Self-Management Education and Support

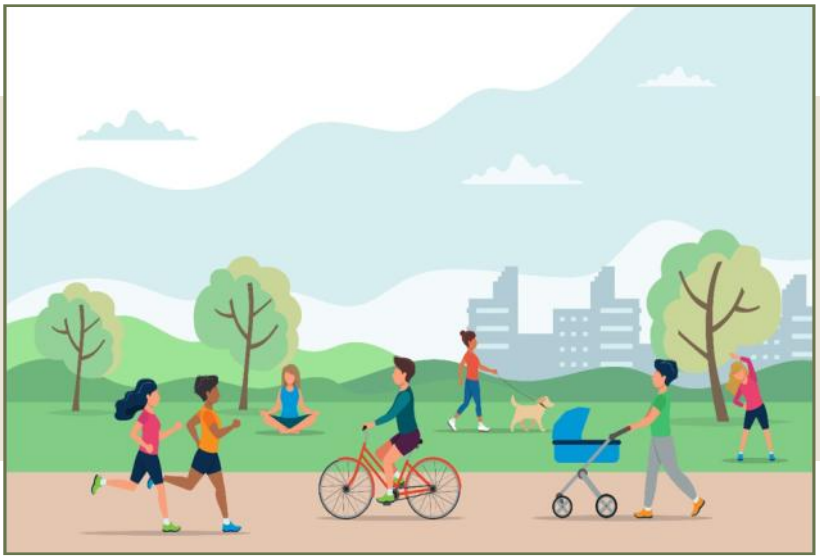
BEING ACTIVE

Disclaimers

The views expressed in this presentation are those of the authors/facilitators and do not necessarily reflect the official policy of the Department of Defense, Defense Health Agency or the U.S. Government. The mention of any non-federal entity and/or its products is for informational purposes only, and is not to be construed or interpreted, in any manner, as federal endorsement of that non-federal entity or its products.

Acknowledgment of Support and Disclaimer: This material is based upon work supported by the DoD Information Analysis Center Program Management Office (DoD IAC PMO) and sponsored by the Defense Technical Information Center (DTIC) and the Navy and Marine Corps Force Health Protection Command (NMCFHPC) under Contract No. FA807518D0005-FA807523F0016.

AI-enabled tools were used to assist in the development of select content within this presentation. All outputs were reviewed, validated and approved by the authors prior to use/dissemination.



Welcome to the DHA Diabetes Self-Management Education and Support (DSMES) Program

This program is a core of 8 modules that focus on Type 2 Diabetes with additional modules available for Type 1 and Gestational Diabetes. These are available in-person, virtually and recorded so they are available at your convenience at: warfighterwellness.org/diabetes

All handbooks contain:

- Reading materials.
- Notetaking pages.
- Glossary.
- Additional resources.

- Diabetes Demystified
- Healthy Coping
- Healthy Eating
- Being Active
- Taking Medications
- Monitoring
- Reducing Risk
- Tools & Solutions

In This Module You Will:

- List the benefits of being active.
- Create a personal activity plan.
- Recognize how to exercise safely.
- Explain how to adjust food intake to balance the impact of physical activity.
- State why medications and insulin are adjusted for physical activity.



Glossary

Ketones: Acids produced in body by liver. Never exercise if ketones are present, as it can trigger Diabetic Ketoacidosis (DKA).

Resistance: Exercises designed to build muscle strength using weights, resistance bands or bodyweight.

Sedentary: Any waking activity that is low energy spent while sitting, reclining or lying down.

Health Literacy

Health literacy with being active means understanding how to monitor intensity levels, how activity can affect insulin sensitivity and when/why to test around activity to ensure glucose levels are in target range.

Language Matters

Sometimes we are intimidated when approaching activity goals. We all know what we should be doing, but maybe we just are not doing it. Speak to yourself with encouragement and allow slow going. Maybe start with a learning goal rather than a process goal. You got this!



Types of Activities

Physical activity is any movement that makes your muscles work and helps your body use energy. This includes both your lifestyle in general and the activities you do at work.

Exercise is a specific and planned activity. Ensuring you are getting all of the movement recommendations to support your body.



Aerobic (Cardio)

- Moving over time that increases heart rate and breathing.
- Include High-Intensity Interval Training (HIIT) for more significant changes.

Benefits:

- Improves glucose sensitivity and control.
- Helps with weight management.
- Reduces risk for cardiovascular disease.
- Boosts overall well being.
- Improves circulation.
- May lower medication needs.



Strength

- Working muscles against a force to improve muscle strength.
- Increases muscle mass and tone.

Benefits:

- Improves glucose sensitivity and control.
- Helps with weight management.
- Reduces risk for diabetes complications.
- Improves daily functions and bone health.
- May lower medication needs.





Flexibility & Balance

- Movements that stretch your muscles.
- Likely in combination with strength and aerobic.

Benefits:

- Improves range of motion.
- Prevents injuries.
- Supports physical function.
- Reduces muscle soreness.
- Better balance reduces fall risk.
- Lessens affects of complications.

Recommendations

- 150 minutes or more of moderate to vigorous aerobic activity per week.
- Be active at least 3 days per week with NO more than 2 consecutive days without physical activity (exercise).
- 2-3 sessions per week of strength training.
- Flexibility and balance training 2-3 times per week for adults.
- Sitting should be interrupted every 30 minutes.
- 60 minutes per day for children and adolescents.

For weight loss or prevention of regain:

- 250-300 minutes per week of moderate-to-vigorous to support weight change.

Overall Benefits of Activity

Physical	Mental
• Aids glucose control. • Improves insulin sensitivity. • Prevents or slows complications. • Helps manage weight. • Reduces cardiovascular risk factors. • Improves body composition, mobility, physical function and mortality.	• Sharpens focus and concentration. • Supports brain health and memory. • Reduces mental fatigue. • Improves problem solving.
Emotional	**Social**
• Boosts mood. • Reduces depression and anxiety. • Lowers stress and tension. • Builds confidence.	• Provides connection and community. • Encourages support. • Strengthens relationships. • Creates a positive environment.

What are you already doing to increase activity?

Getting Started

- Find activities you enjoy—will be more likely to keep going.
- Begin with short sessions: 5-10 minutes of walking, stretching or light activity.
- Build up by adding a few additional minutes each week.
- Set SMART goals that fit your life.

Activity: Daily Steps	Instructions
Baseline	Keep track of steps every day for 1 week. Write down the average.
Build	Add 500 steps to the above average each week until goal is met.

Considerations

- What are some challenges you face when starting physical activity?
- What would you like to accomplish?
- What inspires you?
- Do you have a friend who may want to join you?
- Is there a class or league you are interested in?
- What equipment do you have access to? Is training on safe use available?



Overcoming Challenges

Challenge	Ideas
"I don't have time."	• Try three 10-minute sessions each day. • Work it around something else. "Walk a block after dropping kids off at school." • Do a few body weight movements after finishing a chore (exercise snack).
"I get tired." or "I can't walk far."	• Go slow and build up. • Start with bodyweight exercises, leg lifts or upper body movements.
"I don't like gyms."	• Exercise at home—resistance bands, stretching, dancing, stairs and walking in your neighborhood. • Find online classes, videos or routines. • Purchase something you know you will use.
What is your challenge?	**How will you overcome this?**

Write your ideas to overcome challenges here:

_____

_____

Create an Activity Plan

- Choose favorite activities.
- Start slow and easy to avoid injury.
- Include intensities, routines and/or times in your goal.
- Sign up for classes if appropriate.
- Plan for when motivation drops or life happens (rain, travel, etc.).
- Track progress.



Talk Test to Measure Intensity

Low Intensity

- Can carry on conversation with no trouble.
- Good for warm up and cool downs.

Moderate Intensity

- Can talk but not sing.
- Faster heart rate and breathing.
- Work to get most activity in this range.

Vigorous Intensity

- Unable to say more than a few words without pausing for breath.
- Breathing and heart rate is hard and fast.
- Aim for this intensity for a few seconds/minutes several times during moderate activity to make it a HIIT event and increase benefits.

Tracking Progress

- Can help see improvements and stay motivated.
- Steps or minutes of movement.
- Fitness journal, device or app.
- Glucose levels before, during and after.
- Talk test levels achieved and how long.



Is there something you are using to increase consistency?

Sneaking Activity In

Exercise Snacking: Doing a small portions of a workout several times a day or when time is limited or doing other tasks.



Examples:

- Doing 10 squats while waiting for food in the microwave.
- Completing 5 slow toe touches after finishing a chore.

What are you thinking of doing?

_____

_____

Safety Tips

- Check glucose before activity if recommended by your care team. Bring your glucose meter to test if necessary.
- Carry a source of sugar if you take insulin or medications that may cause low glucose levels.
- Wear a diabetes ID, alert bracelet or activate your "in case of emergency" or Medical ID on your phone.
- Hydrate before, during and after activity.
- Wear proper shoes and check feet daily.
- Use assistive devices as needed.
- Start slow and increase gradually.
- Discuss with your healthcare team if medication adjustments are needed.

Physical Activity & Glucose

- Body is more efficient at using glucose for fuel, lowering glucose levels.
  - Increases insulin sensitivity.
  - Can continue for over 24 hours.
  - Watch for low glucose levels.
- Staying active throughout the day reduces glucose spikes after meals.
- **TIP:** Taking a 10-15 minute walk, 30-90 minutes after meals can lower post meal glucose.

Monitoring Glucose Before Exercise



Check your glucose 15-30 minutes before exercise if you:

- Take insulin or medicines that can cause lows.
- Are starting a new or more intense activity.
- Have had recent lows.

If your glucose is below 100 mg/dL:

- You may need a quick carbohydrate (15-20 grams).
- Recheck in 15 minutes. If still low, have another snack before starting.

Type 1 Diabetes and glucose is 250 mg/dL or higher:

Check for ketones.

- If ketones are present, do not exercise until levels come down.
- If no ketones present, drink water and try light activity until levels improve.

Type 2 Diabetes and glucose is 300 or higher:

- Drink water and try light activity, warm up and retest in 15 minutes to see if glucose goes down.
- If does not go down, check for ketones.

Monitoring Glucose During Activity

May not need to check during all activity.

Recommendations for checking:

- Activity lasts more than 45-60 minutes.
- Feeling symptoms of low glucose.
- Trying a new activity.
- Using insulin or medicines that can cause lows.

Symptoms of level 1 low glucose:

- Shakiness.
- Sweating.
- Fast heartbeat.
- Hunger.
- Headache.

If symptoms appear, remember 'Rule of 15' but increase goal to 100 from the usual 70 mg/dL.

- Stop. Check your glucose right away.
- If 100 or lower, treat with 15-20 grams of carbohydrate.
- Wait 15 minutes. Recheck.
- If still below 100, eat another 15 grams carb.
- Repeat as necessary.
- Do not continue exercise until glucose is over 100.

What is your plan for glucose monitoring during activity?

Monitoring Glucose After Exercise

Glucose can continue to change up to 24 hours or more after activity.

If you are using insulin or certain medicines, check glucose:

- Right after you finish.
- 2-4 hours later, especially if exercise was long or intense.
- Anytime you feel symptoms of low or high glucose.

Post-exercise Lows

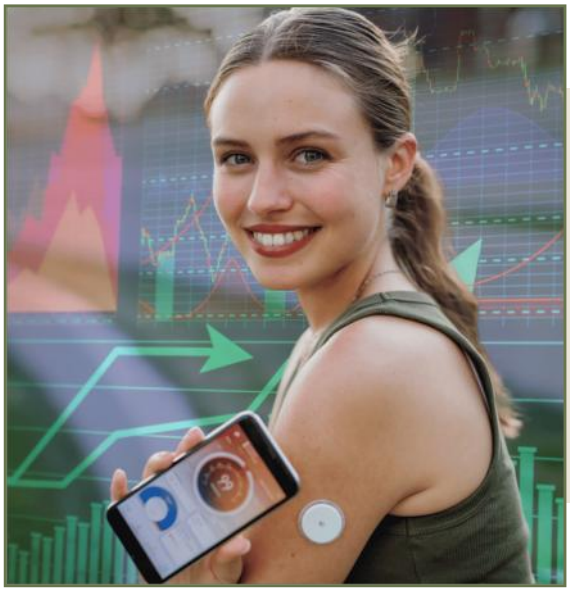
- More common after moderate or long activity.
- Can happen overnight.

Post-exercise Highs

- Can happen after very intense activities (liver released glucose for energy).
- Avoid dehydration.

CGMs & Exercise

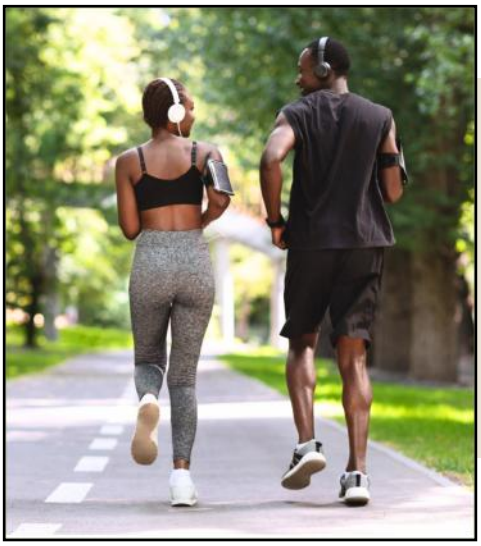
- Continuous Glucose Monitors (CGMs) lag behind blood glucose monitor (BGM) readings during fast changes.
- Watch the trend arrows (up, down and steady).
- Set low alerts to 100 before exercise for added safety.
- Consider using a BGM if your symptoms don't match CGM reading.



Do you have any questions for your care team?

Stay Motivated

- Set lighter goals at first.
- When you're tired, aim for 5 minutes. Once you start you may keep going.
- Prepare the night before (fill gym bag, get snacks ready, etc.).
- Find an activity partner.
- Share fitness goals with others.





Modifying Physical Activity

- Everyone can be active, even with chronic health conditions.
- Goal is to move safely to protect joints.
- Choose activities that match your strength, balance and comfort level.
- Always check with clinician if unsure if exercise choice is appropriate.

Activity is the most prescribed treatment for diabetes!

When to Modify

These conditions may require modifications for physical activity:

- Arthritis or joint pain.
- Heart failure.
- Chronic Obstructive Pulmonary Disease (COPD).
- Peripheral neuropathy.
- Retinopathy or certain eye disease.
- Obesity or limited endurance.
- Balance problems or fall risk.
- Chronic pain or fatigue.
- Cane, walker, wheelchair.
- Post medical procedure or illness.

Two Types of Goals

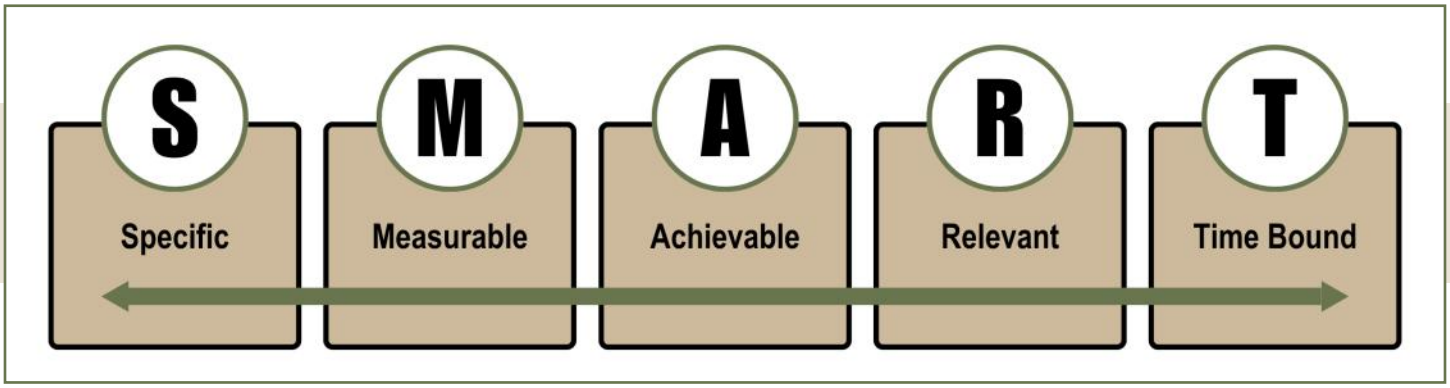
Learning Goals: If not ready to get active yet. Find classes available in your area or online in something you may enjoy? E.g., find yoga classes in my area that meet my budget.

Process Goals: Made when ready to get going. E.g., walk 30 minutes 5 times per week starting next week for 12 weeks.

What goals have you set? _____

_____

_____



Key Points

- Physical activity improves insulin sensitivity and metabolism.
- Physical activity can provide physical, emotional, mental and social benefits.
- Creating a personal activity plan can be key to motivation and getting active.
- It is recommended to exercise at least 150 minutes each week and to include strength training/flexibility/balance 2-3 times each week.
- Safety is key when being active.
- Exercise can be modified to fit any ability and health condition.
- Stay on track by creating a personal activity plan and setting goals.

Resources

- Diabetes Demystified
- Healthy Coping
- Healthy Eating
- Being Active
- Taking Medications
- Monitoring
- Reducing Risk
- Tools & Solutions

Core DSMES Sessions:

These core sessions contain vital information toward understanding how diabetes effects the body and all the recommended health behaviors to support self-management.

Link to recorded classes:
warfighterwellness.org/diabetes

Online:

American Diabetes Association: https://diabetes.org/health-wellness/fitness

Center for Disease Control and Prevention: https://www.cdc.gov/diabetes/living-with/physical-activity.html

National Institute of Diabetes and Digestive and Kidney Diseases: https://www.niddk.nih.gov/health-information/diabetes/overview/healthy-living-with-diabetes

Notes:

American Diabetes Association®
Education Recognition Program

The American Diabetes Association Recognizes this education service as meeting the National Standards for Diabetes Self-Management Education and Support.

If you have any concerns about the diabetes education you receive:

Please call
1-888-232-0822

or

write
American Diabetes Association
Director, Education Recognition Program
2451 Crystal Drive, Suite 900
Arlington, VA 22202

Refer to 006585