

# Diabetes Handbook for Active Duty Service Members

A Supplement to the VA/DoD publication:  
*Self-Care Skills for the Person with Diabetes*



## Contact Information

### **Health Care Provider:**

Name: \_\_\_\_\_

Number: \_\_\_\_\_

### **Other Health Care Team Members:**

Name: \_\_\_\_\_

Number: \_\_\_\_\_

Name: \_\_\_\_\_

Number: \_\_\_\_\_

### **Pharmacy (Refill):**

Name: \_\_\_\_\_

Number: \_\_\_\_\_

Depending on your facility, your diabetes team may include a diabetes educator, dietitian, counselor, and/or exercise therapist.

Knowing the members of your health care team and working with them will help you control your diabetes.

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## Diabetes in the Military



You are not alone.  
In 2011, six out of every 1,000  
active duty service members  
were living with diabetes.<sup>1</sup>

You will be faced with challenges as you perform duties in support of the mission.

This *Diabetes Handbook for Active Duty Service Members* is a supplement to the *Self-Care Skills for the Person with Diabetes* publication from the VA/DoD.

This handbook addresses many of the challenges you will encounter. For any additional questions, consult with your health care team or request a referral for diabetes self-management education.



## **Your Career**

Diabetes will have an impact on your military career. Individuals diagnosed with diabetes will be evaluated by a Medical Evaluation Board (MEB)/Physical Evaluation Board (PEB) to determine if he/she is “fit for duty”. The decision will be based on the following:

- Ability to be employed within your career field
- Ability to care for your diabetes (i.e. make appropriate lifestyle changes, manage blood glucose, avoid complications)
- Commander/career leadership recommendation for retention

Diabetes *will* limit options for deployment. Individuals with diabetes may or may not be eligible to deploy. There are service specific requirements that must be met before clearance to proceed to a combat zone or other austere environments. A complete medical evaluation will be conducted prior to deployment for individuals requiring any medication (oral or injected) used to treat diabetes.

Refer to **Appendix A** for service-specific regulations defining criteria for medical board review, deployment, retention and waiver policies.

## **VA Benefits**

Individuals with a diagnosis of diabetes may qualify for VA medical benefits. Contact your local VA Office to schedule an appointment for more information.

To find a VA Office in your area, call 1-800-827-1000 or visit the website at: <http://www.va.gov/>

## **Managing Stress**

A military career is very demanding. Living with a chronic disease adds stress. There are many options for getting assistance, when needed. Life Skills, Chaplain services, Mental Health, and other DoD resources are available for you. Refer to the *Self-Care Skills for Persons with Diabetes*, pages 42-43, for stress reduction information. An online resource that may be useful to you is The Behavioral Diabetes Institute: [www.behavioraldiabetesinstitute.org](http://www.behavioraldiabetesinstitute.org)

## **Have a Support System**

Disclosing your diabetes to others is your decision. However, your first-line supervisor, as well as a support person, should be aware of your condition. Always have a Wingman, Battle Buddy or Shipmate for support. He/she needs to be aware of your diabetes. Do not let a PCS move, TDY/TAD, or deployment disrupt your support system.

Choose a support partner that:

- Will learn about how you manage your diabetes
- Will encourage you through challenging situations
- Will recognize the symptoms of hypoglycemia and help you treat it appropriately
- Will be honest with you
- Will make you aware of inappropriate or dangerous self-care behaviors



## **Medical Alert Identification**

It is important that you wear an authorized form of identification, such as a medical alert bracelet or an official medical “dog tag” that alerts others of your diabetes.

Refer to **Appendix B** for service-specific policies and regulations on distribution of medical alert tags.



## Monitoring Your Blood Glucose



Your health care team will help you identify your blood glucose goals and how often and when you need to monitor. It is important to know your blood glucose response to your daily activities.

Self-monitoring will help you identify deviations in blood glucose resulting from activities related to your job. By identifying these variations, you can treat high or low blood glucose as needed as well as prevent future problems.

You will need to test your blood glucose more often:

- If there is any change to your current medication regimen
- During an illness, injury, or times of high stress (“Sick Day Management” on pages 32-37 in *Self-Care Skills for the Person with Diabetes*)
- If you experience significant changes in your duty or job activities

Keep your blood glucose meter with you whenever possible. Make use of the pockets in your uniform.

You must test your blood glucose before you drive or operate any type of machinery.

Refer to the meter instruction manual for any questions on its use.

***NOTE: Improper care and use of your meter may cause inaccurate results.***

Meter test strips are susceptible to moisture, dust and heat. Do not expose a test strip until you are ready to test. If applicable, re-cap the vial as soon as you remove the test strip you plan to use; keep your test strips in the original container.

It is best to always wash your hands with soap and water prior to testing your blood glucose. If using any type of alcohol-based product to clean the site, allow it to dry completely. Wipe away the first drop of blood and apply the second drop to the test strip as alcohol can alter the reading.



## **Hypoglycemia**

Hypoglycemia can endanger you or your fellow service members, and may jeopardize your mission. Active duty military members have multiple risk factors for hypoglycemia.

Physical Activity	<ul style="list-style-type: none"> <li>• High degree of variability in daily/weekly activity schedule</li> <li>• Increase in caloric demand without adequate intake</li> </ul>
Food	<ul style="list-style-type: none"> <li>• Skipping meals/snacks</li> <li>• Delaying meals/snacks</li> <li>• Irregular timing of meals</li> <li>• Irregular carbohydrate content</li> <li>• Not carrying a carbohydrate source</li> </ul>
Medication/ Insulin	<ul style="list-style-type: none"> <li>• Frequent medication/insulin adjustments</li> <li>• Irregular timing of medication/insulin dosages</li> <li>• Failure to match medication/insulin with food intake</li> <li>• Failure to adjust insulin with changes in activity level</li> <li>• Inaccurate preparation of insulin dose</li> </ul>

### ***Hypoglycemia Signs/symptoms***

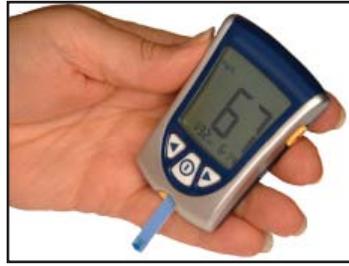
- Heavy breathing
- Slow thinking, blurred vision
- Slurred speech, not coordinated
- Numbness, trouble concentrating
- Dizziness, fatigue/sleepiness
- Weakness, headache
- Changes in body temperature
- Tingling in extremities
- Trembling or shaking
- Fast heart beat
- Sweating
- Hunger, nausea

You may experience symptoms that are not on the list or that vary depending on the severity or other conditions. Make it a point to note your specific symptoms so that you can identify when your blood glucose is dropping.

## Treating Hypoglycemia

### Use the "Rule of 15":

- Check your blood glucose.
- If less than 70 mg/dL, eat or drink 15 grams of fast-acting carbohydrates.
- Wait 15 minutes, then re-check blood glucose.
- Repeat process until blood glucose is greater than 70 mg/dL (*Self-Care Skills for the Person with Diabetes*, page 19).



Glucose tablets are an effective method to treat hypoglycemia. They are portable, do not require refrigeration and work very quickly. Bring them with you when deployed. Ask friends/relatives to send them in a care package.

If you do not have glucose tablets, you can find what you need in your MRE, at the dining facility or shoppette. Some foods and beverages with fast-acting carbohydrates include:

- Hard candy (not sugar-free)
- Dried fruit
- Fruit juice
- Sugar or jelly
- Lemonade/punch drink pouch (not sugar-free beverage)



### Important Tips for Treating Hypoglycemia:

- Do not panic! Do not over treat. When possible, rest during the 15 minutes after treating and before re-checking your blood glucose.
- Do not use high fat foods to treat low blood glucose. Fat delays the absorption rate of carbohydrates.
- Notify your supervisor and/or a health care provider as soon as possible.
- If your blood glucose remains below 70 mg/dL after three treatments (waiting 15 minutes after each treatment) with a fast-acting carbohydrate, seek medical attention immediately.
- If you have type 1 diabetes, make sure you have a glucagon kit.

## **Hyperglycemia**

Hyperglycemia, or elevated blood glucose, can lead to complications that will hinder your ability to perform your job. Below are some of the risk factors for hyperglycemia.

Physical Activity	<ul style="list-style-type: none"> <li>• Decrease in usual exercise</li> <li>• Confined to quarters</li> <li>• Change in duties</li> </ul>
Food	<ul style="list-style-type: none"> <li>• Extra meals and snacks</li> <li>• Increased carbohydrate intake</li> </ul>
Medication/insulin	<ul style="list-style-type: none"> <li>• Inadequate or missed dose</li> <li>• Expired or altered insulin</li> <li>• Failure to match medication/insulin with food intake</li> </ul>
Stress	<ul style="list-style-type: none"> <li>• Injury or illness</li> <li>• Inadequate amounts of sleep</li> <li>• Psychological, emotional or environmental stress</li> </ul>

## ***Hyperglycemia Signs/Symptoms***



- Increased urination
- Increased thirst
- Headache
- Irritability
- Blurred vision
- Fatigue or low energy
- Dry, itchy skin
- Increased hunger
- Wounds/infections that do not heal

If you have type 1 diabetes and experience hyperglycemia, you should check for ketones as instructed by your health care provider.

## **Monitoring During Field Exercise/Training**

Monitor your blood glucose during training exercises to learn how your body responds to the stress of the exercise and increased activity. You may not be able to test when you are in the field or “under fire.” Training is similar to real-life deployment scenarios. Monitoring frequently will give you the information needed to anticipate and prevent problems with fluctuating blood glucose levels in other situations.

A purpose of monitoring is to detect and prevent hypoglycemia, or low blood sugar, which can put you and others in danger.

- Test your blood glucose if you experience any symptoms of hypoglycemia.
- Make testing a priority! If you do not make time to test, you may eventually spend time treating and recovering from a hypoglycemic or hyperglycemic event that could have been prevented.





## Healthy Eating



During mission training or deployment, healthy eating for people with diabetes can be a continuous challenge. You can face extended hours, rotating shifts, irregular meal times and limited food selections. Take advantage of a consult with a registered dietitian (RD) to determine your energy needs and develop meal planning strategies.

For information on using the plate method and healthy portion sizes, refer to pages 8 and 9 of *Self-Care Skills for the Person with Diabetes*.

## Reading Nutrition Facts Labels

### Vegetarian Ratatouille

<b>Nutrition Facts</b>			
Serving Size 1 pouch (227g /8 oz)			
Servings Per Container 1			
Amount Per Serving			
<b>Calories</b>	210	Calories from Fat 70	
<b>% Daily Value*</b>			
<b>Total Fat</b>	8g		<b>12%</b>
Saturated Fat	1g		<b>5%</b>
Trans Fat	0g		
<b>Cholesterol</b>	0mg		<b>0%</b>
<b>Sodium</b>	600mg		<b>25%</b>
<b>Total Carbohydrates</b>	29g		<b>10%</b>
Dietary Fiber	7g		<b>28%</b>
Sugars	4g		
<b>Protein</b>	9g		
Vitamin A	10%	•	Vitamin C 25%
Calcium	8%	•	Iron 10%
* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:			
		Calories	2,000    2,500
Total Fat	Less than	65g	80g
Saturated Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2400mg	2400mg
Total Carbohydrate	Less than	300g	375g
Dietary Fiber	Less than	25g	30g
Calories per gram:			
	Fat	9	• Carbohydrate 4    • Protein 4

Nutrition information provided in collaboration with the US Army Institute of Environmental Medicine (USARIEM) and the Combat Feeding Directorate (CFD)

Look at the **Serving Size**. The information on the label is based on one serving size.

Count the **Total Carbohydrates**. Do not count the sugar. Sugars are already counted as part of the total carbohydrate. Almost all carbohydrates eventually break down to glucose in your body.

For healthier options, choose foods with greater than 2 grams of dietary fiber per serving.

### Meals, Ready-to-Eat (MRE)

During training or deployment, a MRE may be your meal of the day, and the selection can be limited. Fortunately, each individual package has a **Nutrition Facts** label so counting carbohydrates is easy.



## **Snacking**

To minimize the risk of hypoglycemia when you are more active, do not go more than 3-4 hours without eating at least a small amount of carbohydrates. Snacks should have about 15-30 grams of carbohydrates, at least 4 grams of protein, and include some fat.



Look for options with more than 2 grams of fiber per serving. Fiber will slow carbohydrate digestion, keep you satisfied longer, and minimize spikes in blood glucose levels after eating. You can also ask a registered dietitian about specialty snack bars created for those with diabetes or other options that would be appropriate for you.

At deployed locations, non-perishable snack bars may be available at your dining facility. Some locations may have a base/post exchange or shoppette where you can purchase appropriate snacks. Encourage friends and family to include your favorite healthy snacks in care packages.



## **Sugar-Free Products**

Sugar alcohols commonly found in “diabetic” sweets and desserts can include sorbitol, mannitol, xylitol, maltitol, glycerol, or erythritol. Sugar alcohols have less of an effect on glucose levels. However, they can cause diarrhea, abdominal cramping and/or bloating. “Sugar-free” or “no sugar added” does not always mean carbohydrate free! Always review the “Nutrition Facts” on the label to count the total carbohydrates.

## Sugar Free Cookies

<b>Nutrition Facts</b>			
Serving Size 3 cookies (32g)			
Amount Per Serving			
<b>Calories</b>	150	Calories from Fat 80	
<b>% Daily Value*</b>			
<b>Total Fat</b>	9g		<b>14%</b>
<b>Saturated Fat</b>	3.5g		<b>18%</b>
<i>Trans Fat</i>	0g		
<b>Cholesterol</b>	less than 5mg		<b>1%</b>
<b>Sodium</b>	130mg		<b>5%</b>
<b>Total Carbohydrates</b>	20g		<b>7%</b>
Dietary Fiber	2g		<b>6%</b>
Sugars	0g		
Sugars Alcohols	7g		
<b>Protein</b>	2g		
Vitamin A	0%	•	Vitamin C 0%
Calcium	0%	•	Iron 4%
* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:			
		Calories	2,000 2,500
Total Fat	Less than	65g	80g
Saturated Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2400mg	2400mg
Total Carbohydrate	Less than	300g	375g
Dietary Fiber	Less than	35g	30g
Calories per gram:			
	Fat	9	• Carbohydrate 4 • Protein 4

## **Non-Nutritive Sweeteners**



Sugar substitutes, when used in moderation, can be an effective way to reduce sugar and calories in your diet. Examples of non-nutritive sweeteners include saccharin (Sweet’N Low®), aspartame (Equal®), stevia/rebaudioside A (Truvia®), and sucralose (Splenda®).



## Physical Training



Physical fitness, exercise, and activity are all part of being in the military. You need to know how your diet, activity level and medication affect your blood glucose.

First, talk with your health care provider to determine if there will be any limitations to your exercise. Visit with a fitness professional at your Health and Wellness Center, if available.

When you change your activity pattern (such as an exercise program, a deployment, or training mission) you will need to check your blood glucose more often.

- With or without medications, exercise can lower your blood glucose. Certain diabetes medications increase the risk for hypoglycemia. Ask your health care provider if any of your diabetes medications, such as sulfonylureas and meglitinides, have a side effect of low blood glucose.
- When you anticipate a change in your activity level, meet with your health care provider to discuss your medications, including dosing adjustments as needed.



- If you take insulin, do not inject insulin into the part of the body you will be exercising. For example, if jogging, do not inject in your thigh or buttock. The increased blood flow to the exercising muscle will make your insulin absorb faster and drop your blood glucose more quickly.

Type of Insulin	Onset	Peak Effect	Duration
<b>Rapid - acting</b>			
Aspart (Novolog®)	10-20 minutes	40-50 minutes	3-5 hours
Glulisine (Apidra®)	15-30 minutes	30-90 minutes	3-4 hours
Lispro (Humalog®)	15-30 minutes	30-90 minutes	3-5 hours
<b>Long-acting (Basal)</b>			
Detemir (Levemir®)	60-120 minutes	6-8 hours	10-24 hours
Glargine (Lantus®)	60 minutes	No peak	20-24 hours

Source: VA/DoD Clinical Practice Guideline for Management of Diabetes Mellitus. Version 4, 2010. *Self-Care Skills for the Person with Diabetes* p 30.

- NOTE:** There is an increased risk of hypoglycemia during the peak effect time and duration of fast-acting insulin. For more information on the insulin types and how insulin works, refer to page 30 of *Self-Care Skills for the Person with Diabetes*.



## **Checking Blood Glucose**

Test your blood glucose anytime you are not feeling well and as recommended by your health care provider. Use the table below as a guide.

Pre-exercise	Check 2-3 times in 30 minute intervals before your activity or exercise <sup>2</sup>
During exercise	Continue to check every 30 minutes <sup>2</sup>
After exercise	Check every 2 hours for up to 2 readings and again before going to bed <sup>2</sup>

## **Blood Glucose Level Before Exercise**

- If less than 80 mg/dL: DO NOT EXERCISE! Eat a large snack that includes 30 grams of carbohydrates. Wait 15 minutes, then re-check your blood glucose.<sup>3</sup>
- If 80-120 mg/dL: Eat a small snack that includes 15 grams of carbohydrates before starting exercise.<sup>3</sup>
- If 120-250 mg/dL: Exercise. Monitor (especially 4 to 6 hours after exercise) for sudden drops in blood glucose.<sup>3</sup>
- If greater than 250 mg/dL: BE CAREFUL. Your blood glucose may increase OR decrease during or after your exercise or activity.<sup>3</sup> If you have type 1 diabetes, check for ketones.
- If greater than 400 mg/dL: You may have an infection or illness. Contact your health care provider. If you have type 1 diabetes, check urine for ketones. If you have type 2 diabetes, consult your health care provider for ketone testing recommendations. Drink lots of water and/or calorie-free liquids.

DO NOT exercise if there are ketones in your urine or blood. Continue to check your blood glucose frequently. DO NOT exercise until your blood glucose is 250 mg/dL or less.

## Exercise Safely

- Wear appropriate shoes for your activity or exercise. Refer to page 41 of *Self-Care Skills for the Person with Diabetes* and the “Foot Care” section of this handbook for more information on taking care of your feet.
- Wear your diabetes medical alert identification.
- Stop activity or exercise if you experience any lightheadedness, pain, or signs or symptoms of hypoglycemia.
- Always have an emergency source of fast-acting carbohydrates (glucose tablets or glucose gel) with you.
- Follow proper hydration guidelines (see “Hydration” section).  
Hyperglycemia will increase urination which can cause dehydration.
- Additional monitoring is recommended for up to 24 hours after the end of your exercise/activity to prevent post-exercise, late onset hypoglycemia.
- The additional weight of combat attire and the likelihood of increased physical exertion may require extra carbohydrates to maintain stable blood glucose.



## Hydration

Thirst centers in your brain are not stimulated until you have already lost 1% to 2% of your body water.<sup>4</sup> If you have nerve damage, it may take you even longer to realize you are already dehydrated. Individual needs vary depending on intensity and duration of activity, ambient temperatures, relative humidity, and body size. Make sure you are adequately hydrated for your activity and the environment.

How can you tell if you are dehydrated? Look at the color of your urine. A light straw color reflects an acceptable status. A dark color and relatively small amount of urine production is usually consistent with dehydration.



\*Note: Intake of vitamin B supplements, specifically riboflavin, can cause brightly-colored urine, even when you are well hydrated.

## Hydration Tips

### Before Exercise:

- Drink fluids with meals.
- Begin your activity in a well- hydrated state to avoid excessive water and electrolyte loss.
- Drink approximately 20 fl oz of a liquid 2 hours before strenuous exercise.<sup>5</sup>



### During Exercise:

- Stay hydrated.
- To avoid dehydration, 13-32 fl oz of a liquid should be consumed every hour (3-8 fl oz every 15 minutes).<sup>5</sup>
- If the activity/exercise is greater than 1 hour, a sports drink with electrolytes (from salts) and carbohydrates (from sugars) is recommended.<sup>5</sup>

### After Exercise:

- Drink at least two 8 oz cups of fluid every 20-30 minutes for 2½ hours after exercise.<sup>6</sup> The fluid **MUST** be consumed over a period of time rather than all at one time.
- Do not drink more than 48 oz of fluid per hour.<sup>6</sup>
- Consume salty snacks or sports drinks with electrolytes (such as sodium and potassium) to reduce the risks of muscle cramps and hyponatremia (abnormally low sodium levels in your blood). Salty snack foods include pretzels and crackers.



**BE AWARE:** Drinking too much water may result in hyponatremia and can impair your activity. Dehydration, diuretics (“water pill” medications) and excessive sweating are other possible causes. Signs and/or symptoms of hyponatremia include nausea, confusion, headache, loss of energy or fatigue, and/or muscle weakness, spasms, or cramps.

## **Sports Drinks or Carbohydrate-electrolyte Beverages**

“Sport drinks, or carbohydrate-electrolyte beverages, are intended to maintain hydration and restore electrolytes, unlike energy drinks (which contain



caffeine)”<sup>7</sup> Sports drinks typically contain carbohydrates and electrolytes (such as sodium and potassium). In addition, some of the newer-marketed drinks have added protein.<sup>7</sup> More information can be found on the Human Performance Resource Center website, <http://hprc-online.org/about-us/about-hprc>, a DoD initiative under the Force Health Protection and Readiness Program. If you have questions about any additional additives in your favorite drinks and supplements, talk with a registered dietitian or health care provider.

During extended activity, sport drinks can help maintain blood glucose levels. Electrolyte replacement is necessary when there is excessive sweating. You will likely need a sport drink if your activity is:

- High intensity greater than 30 minutes
- Moderate intensity greater than 1 hour
- Low intensity greater than 2 hours

Use a sport drink containing 14 to 19 grams of carbohydrates and at least 110 mg of sodium per 8 ounce serving for intense exercise or activity and during exposure to extreme conditions such as heat, humidity, prolonged cold and altitude.<sup>8</sup>

## **Energy Drinks**

Energy drinks are growing in popularity. According to data collected in 2010 by the Joint Mental Health Advisory Team 7, 44.8% of deployed service members consumed at least one energy drink daily, with 13.9% drinking three or more a day.<sup>9</sup> Some



products contain the caffeine equivalent of 1 to 3 cups of coffee or cans of soda. The sugar content can be quite high. Most have more than 25 grams of carbohydrates per 8 ounce serving.

Caffeine is a stimulant that can help people lift heavier weights and temporarily increase their endurance. It is also a diuretic that increases urination, which can lead to dehydration. Most of these products have additives and undisclosed “proprietary blends” that are not regulated for safety and could include substances that are inconsistent with military duty. There have been reports of adverse effects and deaths associated with the high caffeine content.<sup>10</sup> Other stimulants include guarana, ginseng, ginkgo biloba, yerba mate and kola nut. Energy drinks that contain sugar and caffeine can cause significant increases in blood glucose, blood pressure and heart rate.<sup>11</sup> Because many of these ingredients can adversely affect your diabetes and overall health, you should first discuss their use with your health care provider or a registered dietitian.



## Environmental Considerations



The mission can take you into areas of extreme heat or cold. Adapting to the environment is challenging by itself, but more so with diabetes. Pay attention to the weather alerts and take appropriate precautionary measures. Refer to your military service manual for more instructions for identifying and treating heat and cold injuries.

## **Heat-related Conditions**

Individuals with diabetes may develop an impaired ability to sweat.<sup>12</sup> For physically-active military individuals with diabetes who deploy to hot and humid conditions, this inability to sweat predisposes them to serious heat-related illnesses and even



death. Sweat is an essential means to cool the body during heat stress. In high-temperature and humid environments, sweat does not evaporate as quickly as it would in more arid (drier) environments. Activity-related dehydration, heat cramps, heat stroke, heat exhaustion and rhabdomyolysis (muscle fiber contents released into the bloodstream) have been seen with military operations and training in hot, humid conditions.<sup>13</sup> All can have a significant effect on blood glucose management and increase the risk of serious diabetes-related complications.

***Dehydration*** is a decrease in body water.

- Signs/symptoms: dizziness, headache, dry mouth
- Treatment: provide water (see “Hydration” section)

***Heat cramps*** are brief, muscle pains that can result from excessive sweating.

- Signs/symptoms: dizziness, fainting, excessive sweating, muscle aches
- Treatment: provide a sport drink/electrolyte replacement beverage (or add 2 teaspoons of salt to 1 canteen of water)

***Heat exhaustion*** occurs from a combination of dehydration and high body temperature. If not treated, heat exhaustion may lead to heat stroke.

- Signs/symptoms: dizziness, headache, dry mouth, muscle cramps and spasms, nausea or vomiting, paleness, tiredness, weakness
- Treatment: stop activity, move to a cool area, loosen or remove clothing, provide water; if symptoms do not improve within 30 minutes, seek immediate medical help

**Heat stroke** can be very serious and can result in organ failure, brain damage and death.

- Signs/symptoms: body temperature above 104°F, rapid/shallow breathing, red/hot/dry skin, inability to concentrate, confusion
- Treatment: call for medical assistance; until medical help arrives, move to a cool/shaded area, loosen or remove clothing, give sips of water if conscious, spray body with cool water

**Rhabdomyolysis** is a condition causing the release of muscle fiber contents into the bloodstream. This is a significant concern for individuals with diabetes because the kidney cells can be damaged by the filtering of the muscle contents. Heat stroke, overexertion and strenuous activities are risk factors.

- Signs/symptoms: dark or red urine color, decreased urine production, muscle stiffness or muscle pain, muscle tenderness or weakness
- Treatment: call 911/seek immediate medical help as condition can be fatal; rest, hydrate

In order to train safely and effectively in locations with extremely high heat and humidity:

- Check blood glucose before, during and after exercise or activity that is high intensity or of a long duration.
- Drink fluids early and often. Pouring water over your head will not help lower your core body temperature.
- Be aware of the environmental conditions.
- Know the signs and symptoms of heat-related illnesses.



## **Cold-related Conditions**

Prolonged exposure to cold temperatures can result in hypothermia and/or frostbite.

*Hypothermia* occurs when the body's temperature drops too low, affecting the brain, and making it difficult to think clearly or be active. Hypothermia can occur even at cool temperatures (above 40° F) if a person becomes chilled from rain, sweat or submersion in cold water. *Frostbite* is the freezing of tissue, resulting in a loss of feeling and color in the affected areas. Frostbite can permanently damage the body, and severe cases can lead to amputation.



Consider these factors to train safely and effectively in a cold environment:

- Know the signs/symptoms of hypothermia and frostbite.
  - *Hypothermia* can include: shivering, weak pulse, slurred speech, confusion, stumbling
  - *Frostbite* can include: white or grayish-yellow skin area, skin that feels unusually firm or waxy, numbness
- Stay hydrated. Avoid alcoholic beverages. Eat well-balanced meals.
- If you experience symptoms of hypothermia, move to warm shelter, remove wet clothing, warm body with dry blankets or other covering or use body heat (skin to skin). Warm non-alcoholic beverages can help increase body temperature. Do not massage affected extremities or expose to direct heat (i.e., heat lamp, stove). If frost bite is present, seek immediate medical attention.
- Monitor blood glucose; in individuals with diabetes, hypothermia has been associated with hypoglycemic episodes and diabetic ketoacidosis.<sup>14</sup> Shivering uses energy and may cause unexpected hypoglycemia.



## Managing Your Medicines and Supplies



Pages 22 through 31 of *Self-Care Skills for the Person with Diabetes* provide an overview of the medications used to treat diabetes. Medication availability and storage requirements may limit OCONUS PCS or deployment assignments.

Most injectable medications should be refrigerated until you are ready to use them. Once in use, you can store at room temperature. If in an austere deployed environment, insulin should be stored above freezing level, but less than 86°F. Check each of your medications for specific storage requirements. Contact the medical unit at your location if you have questions or need help meeting storage requirements.



Also, be aware of expiration dates on your medications. Note that some medications, such as insulin, should only be used for a limited time once they have been opened, regardless of the expiration date. Check manufacturers' instructions for specifics.

Most diabetes medicines are not available at isolated bases or deployed locations. If you are deployed, make sure that you take at least six months worth of medication with you. Medication should always be placed in your personnel carry-on gear.





## Foot Care



Good foot care is an essential part of diabetes management. Because diabetes affects your nerves and can result in the loss of protective sensation in the feet, keeping your blood glucose in your target range and taking care of your feet will help protect them. You can do a lot to prevent problems with your feet.

## **Shoe Fitting**

Make sure your shoes and boots have room for your toes to move and provide good arch support. Try them on with the same type of sock you would normally wear with the shoe. The best time to purchase or be issued new footwear is at the end of the day. High altitude may cause your feet to swell. In the deployed setting, always inspect the inside of your shoes before putting them on (local small creatures/insects may hide in your boots).



## **Avoid foot problems**

- Wear low-grade compression garment under regulation socks.
- Choose seamless, moisture-wicking socks (Lycra®-type materials) to reduce the risk of blisters and swelling. Avoid over-tight elastic tops.
- Elevate legs/feet one foot above heart level 10-15 minutes, 3 to 4 times a day.
- Drink plenty of water.
- Whenever possible, avoid long periods of standing and sitting.
- If you are prone to sweating feet, consider the daily use of an antiperspirant (stick, roll-on or aerosol) or mild foot powder. Cornstarch is an appropriate and inexpensive powder.
- Prevent blisters:
  - Use a light sprinkling of foot powder.
  - Use double layer socks (wear when trying on new footwear to ensure proper fit).
  - Tape over “hot spots” to reduce friction and prevent blisters.
  - Ask your health care provider or podiatrist about orthotics/padding. Refer to page 41 of the VA/DoD publication *Self-Care Skills for the Person with Diabetes* for basic foot care needs.



## Travel Considerations



Advanced preparation can prevent complications and emergencies. Have a travel plan before you PCS, TDY, TAD or deploy! Always wear some form of medical alert identification (bracelet, “dog tags”, etc.) when traveling.

## **Before You Travel**

- Make an appointment with your health care provider, preferably 4-6 weeks before your departure.<sup>15</sup> Contact your diabetes educator for any questions or concerns you have with your diabetes care.
- Discuss your travel plans and medication regimen with your health care provider.
- Plan for changes in time zones. When traveling north and south, no adjustments in your 24 hour medication regimen are needed.<sup>15</sup> East and west travel and across five or more time zones will disrupt your medication and food schedule.<sup>15</sup> Eastward travel means a shorter day; westward travel means a longer day.<sup>15</sup>
- Know how long your flight will be. If you take insulin, talk with your health care provider regarding any changes to your insulin regimen. Visit your health care team with your travel itinerary in hand. Inform them of any time zone changes. They can help you adjust the timing of your insulin injections based on your travel.
- Identify a support person. Let him or her know you have diabetes and know what to do if you have a hypoglycemic event.



## **What to Pack**

- Snacks such as peanut butter crackers, dried fruit, trail mix or granola bars to cover any delayed or missed meals.
- Glucose tablets, hard candy, dried fruit or other fast-acting carbohydrate sources to treat hypoglycemia.
- Meter and testing supplies to support monitoring your blood glucose every 4-6 hours while traveling.<sup>15</sup>
- For your meter: extra batteries, test strips, and lancets. Bring your meter supplies and medications in your carry-on.
- Back-up meter with extra testing supplies.
- If on insulin: extra insulin pens or vials/syringes, pen needles, alcohol swabs, ketone testing strips, and a glucagon emergency kit.
- If required, small sharps container to dispose of used lancets, pen needles, or syringes. You may be able to obtain small disposable medical waste containers at your MTF or local pharmacy, or online.
- Contact information of your health care providers.
- A copy of your current medication printout from your primary care manager.

If you have any additional concerns or questions regarding traveling with diabetes, talk with your health care provider or visit the Department of Homeland Security Transportation Security Administration website at <http://www.tsa.gov>



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## APPENDIX A: Service-specific Regulations

These are general considerations. Each case is reviewed on an individual basis and is subject to the discretion of the MEB.

### AIR FORCE (AFI 48-123)

- All individuals who develop diabetes will meet a MEB/ IRILO (Initial Return In Lieu Of)
- For diabetes controlled by lifestyle change and/or metformin, the IRILO will most likely recommend the member return to duty (RTD) with an assignment limitation code (ALC). For those with flying status, a waiver will be required.
- For diabetes controlled by oral medications other than metformin, the IRILO may recommend RTD with ALC. Most career fields fit into this category. For those with flying status, there is no waiver. However, there may be exceptions:
  - Rated aviators are commonly retained in non-flying positions
  - Enlisted aircrew may be retained depending on non-flying available positions
- For diabetes controlled by insulin:
  - Short- term use with conversion to oral medications for control will have no effect on the MEB outcome. Refer to oral medication criteria above.
  - Required long term use is usually not compatible with continued active duty. Retention is dependent on job qualifications and Command Support.
- For gestational diabetes refer to the pregnancy limitations. A MEB is not required unless diabetes continues after pregnancy.
- Members who return to duty (RTD) are placed on an Assignment Limitation Code (ALC). The most common is ALC C-2 which limits deployment options and requires review for any OCONUS PCS (no effect on CONUS assignments). RTD status requires an annual reassessment via Review In Lieu of Board (RILO).

## ARMY (AR 40-501)

- Individuals who require insulin or oral medications for control will be referred to a medical evaluation board (MEB).
- Retention will be based on the individual's ability to perform his/her duty satisfactorily and the effect upon the individual's health and well-being by remaining on duty.
- Diabetes or a history of symptomatic hypoglycemia are disqualifiers for:
  - Flying duty Classes 1/1A/2/2F/3/4
  - Airborne, Ranger, or Special Forces training
  - SERE (survival, evasion, resistance, escape) training
  - Free-fall parachute training
- Recommendation for assignment to combat areas or certain geographic areas is based on clinical judgment and commander input.
  - Requires MEB/PEB
  - Considerations include: the geographical area, the potential environment, and austere conditions where medical treatment may not be readily available.
    - \* *Diabetes requiring insulin.* If found fit for duty, the soldier should not deploy to areas where insulin cannot be properly stored (stored above freezing level but less than 86 degrees Fahrenheit) or appropriate medical support cannot be reasonably assured. Requires pre-deployment review and recommendation by an endocrinologist.
    - \* *Diabetes requiring oral medication for control.* If found fit for duty, the soldier may or may not be worldwide deployable dependent upon medical qualifications. See Table 5-1, page 61 for specific guidance.

## **NAVY (SECNAVINST 1850.4 (encl 8); NAVMED P-117 Article 15)**

- Diabetes will be referred to a MEB/PEB when:
  - All cases requiring oral hypoglycemics where control is not adequate, excluding the “honeymoon” period
  - All cases requiring insulin and/or restrictive diet for control
  - When individuals requiring insulin for maintenance are under poor control (“brittle diabetics”)
  - The presence of diabetes alone is often not a criteria for submission of a MEB report - the member must have been tried on appropriate courses of medication (and proper use of LIMDU status), been unresponsive to them, and required untoward number of visits for medical care or hospitalizations
  - The condition must result in an impairment of the ability to perform the duties as a member of the DON
- Waivers for special duty and retention are dependent upon level of control, medications and any complications developed due to diabetes
- Diabetes or a history of symptomatic hypoglycemia are disqualifiers for:
  - All Aviation Duty
  - Diving Duty
  - Special Operations
    - \* May be waived if controlled without use of insulin or long-acting sulfonylurea medication. Dependent on current A1C, medications, and documentation of any end organ damage.
    - \* No waiver if requires insulin or long-acting sulfonylurea medication.
  - Submarine Duty
    - \* May be waived if controlled without use of insulin. Dependent on current A1C, medications, and documentation of any end organ damage.
    - \* No waiver if requires insulin
    - \* Pre-diabetes requiring treatment with medication is disqualifying.

## APPENDIX B: Medical Alert Regulations

### **Medical Alert Identification Regulations** (Pertains to personal jewelry)

#### AFI36-2903

6.3.1.2. Medical alert/identification bracelets are authorized; however, if worn, they will be conservative (moderate, being within reasonable limits; not excessive or extreme) (which is defined as plain, not drawing inappropriate attention or faddish).

6.3.1.5. Necklaces. Will not be visible at any time. If worn, will be concealed under a collar or undershirt.

#### AR 670-1

para 1-14a. Identification bracelets are limited to medical alert bracelets and MIA/POW identification bracelets. Soldiers may wear only one item on each wrist.

para 1-14e. Ankle bracelets, necklaces (other than those described in para 1-7b), faddish (trendy) devices, medallions, amulets, and personal talismans or icons are not authorized for wear in any military uniform, or in civilian clothes on duty.

#### USN Uniform Regulation Article 2201.6d,e

d. Necklaces/Choker. While in uniform, only one necklace may be worn and it shall not be visible.

e. Wristwatch/Bracelets. While in uniform, only one of each may be worn.

### **Medical Warning Tags Regulations** (Pertains to issued “dog tags”)

#### AFI 36-3103

Medical alert tags will be issued by competent medical authority.

#### AR 40-66, 14-4, page 137

The DA Form 3365 and a letter of instruction will be completed by your PCM.

The tag is then procured from your Medical Treatment Facility.

#### BUMED INSTRUCTION 6150.35

The attending physician or dentist must order the tag by completing and forwarding a NAVMED 6150/5, Medical Warning Tag Order. The tag will be procured from the nearest activity having embossing equipment.

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## Keep Track of Your Diabetes Health

Ask your provider to help you set goals to stay healthy

	My Last Result	My Goal	My Target
A1c			
Blood Pressure			
Cholesterol			
LDL			
HDL			
Weight			
Urine Test (eGFR)			

## My Last Exam/Vaccine

Ask your provider about:

	Date
Eye exam(dilated)	
Foot exam	
Dental exam	
Pneumonia vaccine	
Flu vaccine	
Other _____	



### **For More Information**

To view interactive videos on various diabetes topics, visit the military resource:  
The Center for Excellence on Medical Multimedia (CEMM) at  
[www.cemm.org/Video-Downloads/Diabetes.aspx](http://www.cemm.org/Video-Downloads/Diabetes.aspx)

