



## DIVISION OF ELEMENTARY & SECONDARY EDUCATION

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## Minimum Guidelines for The Approved Adrenal Insufficiency Training Program

1. The training program shall be of sufficient length to provide acquisition of content related to review and update of essential knowledge and skill.
2. The licensed registered nurse employed by the district shall provide this training at least annually.
3. Content of the training program shall include the following information:
  - General Information:
    - Regulatory Authority, Division of Elementary and Secondary (DESE) *Rules* in coordination with Arkansas State Board of Nursing (ASBN)
      - A.C.A. §6-18-718 and A.C.A. 17-87-103
    - Reference of Rehabilitation Act of 1973(Section 504); the American Disabilities Act of 1990 (ADA); and the Individuals with Disabilities Education Act (IDEA)
    - Role of the school nurse in delegation of administration of medications to the student and/or volunteer school personnel, individualized healthcare plan development, and training for medication administration as related to adrenal insufficiency
  - Introduction of adrenal insufficiency
  - Training pre-requisites
    - Certification in CPR/AED/FA by an approved national program
  - Definitions
  - Overview of adrenal insufficiency and the associated triggers
  - Recognition of signs and symptoms of students experiencing an adrenal crisis
  - Types of medications available to treat an adrenal insufficiency and crisis
  - Proper administration of medication to treat adrenal insufficiency
  - Evaluation and the necessary follow-up
4. A training protocol including written measurable outcomes.
5. A method of assessment to determine participant understanding of the material.
6. Skills checklist identifying specific steps, date of the training, and signed by the registered nurse employed by the district.
7. Certificate of Completion for the volunteer trained school personnel

### References

Arkansas State Board of Nursing (ASBN) (Revised 2021). School Nurse Roles and Responsibilities - Practice Guidelines

Division of Elementary and Secondary Education (DESE), Arkansas Code Annotated §§ 6-18-718 and 17-87-103 et seq.



Certification of Training in Administration of an Emergency Dose of  
Hydrocortisone Sodium Succinate for an Adrenal Crisis

Name of Volunteer School Personnel:

Knowledge Sets	Demonstrated Mastery (Check and Trainer Initials)	Date	Comments
Summarizes the general information of adrenal insufficiency			
Defines the terminology used in adrenal insufficiency			
Identifies signs and symptoms of adrenal crisis			
Describes the medications used to treat adrenal insufficiency and a crisis			
Outlines relevant information related to hydrocortisone sodium succinate (purpose, function, prescription information, storage, disposal, and expiration)			
<b>Skill Sets</b>			
Identifies when to administer hydrocortisone sodium succinate			
Identifies when to call 911 and the parent/guardian			
Demonstrates correct preparation of hydrocortisone sodium succinate			
Demonstrates correct steps in administration techniques			
Explains evaluation and follow-up necessary when administering hydrocortisone sodium succinate			



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Certification of Training in Administration of an Emergency Dose of Hydrocortisone  
Sodium Succinate for an Adrenal Crisis

Name of Volunteer School Personnel:

\_\_\_\_\_

I certify the above individual has been trained to administer hydrocortisone sodium succinate in accordance with the approved training program by the Division of Elementary and Secondary Education in collaboration with the Arkansas State Board of Nursing and has demonstrated mastery in an adrenal crisis event.

\_\_\_\_\_  
Signature of licensed registered school nurse

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of licensed registered school nurse

I certify I have received the training identified in the skills checklist and believe I am competent to provide emergency assistance to a student experiencing an adrenal crisis. I understand if I have any questions or learn of any changes or concerns with the student, I will immediately contact the school nurse and/or the school administrator. If for any reason I feel I am not adequately trained, need to review, or do not wish to continue to provide this emergency care for any reason, I agree to immediately notify the school nurse or school administrator.

\_\_\_\_\_  
Signature of Volunteer Trained School Personnel

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of Trained Volunteer

This certification must be renewed at a minimum annually, with the opportunity to review procedures more frequently if requested or deemed necessary.

References

Arkansas State Board of Nursing (ASBN) (Revised 2021). School Nurse Roles and Responsibilities - Practice Guidelines

Division of Elementary and Secondary Education (DESE), Arkansas Code Annotated §§ 6-18-718 and 17-87-103 et seq.



## Training Protocol for Adrenal Insufficiency and Crisis

### **WHAT IS ADRENAL INSUFFICIENCY?**

Adrenal insufficiency is an endocrine, or hormonal disorder that occurs when the body is unable to produce enough adrenal hormones, such as cortisol and aldosterone. These hormones help to maintain and regulate key functions in the body such as blood pressure; metabolism (how the body uses food for energy); the immune system; and how the body responds to stress. A student with adrenal insufficiency may experience symptoms of adrenal crisis and if not treated promptly can cause death.

Congenital conditions, cancers, tumors and many other conditions affect the pituitary gland, adrenal gland or other endocrine organs causing adrenal insufficiency. Addison's disease, the common term for primary adrenal insufficiency, occurs when the adrenal glands are damaged and cannot produce enough cortisol.

Approximately 1 in 100,000 people in the United States have Addison's disease. Because cases of Addison's disease may go undiagnosed, it is difficult to determine the frequency of adrenal insufficiency in the general population.

### **ADRENAL CRISIS**

#### **What is adrenal crisis?**

Adrenal crisis is a sudden, severe worsening of symptoms associated with a student diagnosed with adrenal insufficiency, such as severe pain in the lower back, abdomen or legs, vomiting, diarrhea, dehydration, low blood pressure or loss of consciousness.

#### **What can trigger an adrenal crisis?**

Students with adrenal insufficiency may experience an adrenal crisis in many circumstances including illness, such as the cold or flu; an injury, such as a twisted ankle or broken bone; exposure to stressful situations, such as a fire drill; or missing or stopping steroid medications.



### **What are the signs and symptoms?**

Signs and symptoms associated with adrenal crisis may include:

Headache	Stomachache
Nausea or vomiting	Diarrhea
Low back pain or leg pain	Muscle weakness or cramping
Fever (over 100°F)	Loss of appetite
Red cheeks (not attributed with recess or PE)	Dark rings under the eyes
Lethargic – can't stay awake	Trouble focusing or confusion
Dizziness or lightheadedness	Faints or passes out

Changes in emotional behaviors – student may seem upset, angry or more tearful than is usually normal

### **When do I provide care and treatment?**

It is important that school personnel become familiar with the student's health management plan that may identify signs and symptoms the student may experience along with appropriate medication and dosing. Acute observation of the student by the teacher or persons assigned to monitor the student is important.

Age, physical condition, and underlying precipitating events can affect the speed in which a student's health may worsen. Vomiting and diarrhea account for most crises because the body is unable to absorb oral medication.

When a student experiences physical or emotional stress, a "stress dose" of medication is often given. The student's health management plan will have instructions for oral stress dosing for minor illness or injury. Depending on the severity of an event, an injection may be necessary.

Note: "stress dose" is when a person is given a larger than normal dose of their prescribed medication, as recommended by their physician.

It is important to understand the development of adrenal crisis and medicate the student appropriately based on the student's health management plan. Do not wait. Even if the student is not in crisis, administering the medication will not have any adverse effects.



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### **What is not an Adrenal Crisis?**

You may have noticed the symptoms of adrenal crisis mimic the symptoms of many other illness or diseases. The key is to inquire about the diagnosis of adrenal insufficiency or a history of steroid use and CONSULT THE STUDENT'S HEALTH MANAGEMENT PLAN.

### **TYPES OF MEDICATION and ADMINISTRATION**

There are many medications a student is prescribed to treat adrenal insufficiency. Solu-Cortef or Hydrocortisone are steroids that naturally occur in the body and allow the body to metabolize glucose and control vascular activity to maintain blood pressure. It also controls water and salt balance within the body.

To keep their condition under control, a student is often required to take a daily, oral dose of hydrocortisone, dexamethasone or prednisone. The medication prescribed must be taken in the amount and at the times identified in the student's health management plan.

When there is suspected adrenal crisis, additional doses of oral medication maybe necessary, or an injectable medication, such as Solu-Cortef or Solu-Medrol. An injectable medication is given intra-muscularly, which means that it is injected into a large muscle, such as the thigh or buttock.

CONSULT THE STUDENT'S HEALTH MANAGEMENT PLAN FOR THE APPROPRIATE MEDICATION AND ADMINISTRATION.

### **Possible side effects**

Transient hypertension (high blood pressure), tachycardia (rapid heart rate over 100 beats per minute), edema (fluid retention), hyperglycemia (high blood sugar), agitation, delirium (confusion), or psychosis (behavioral disorder may include hallucinations or delusions as an example).

### **Storage**

Oral medication – hydrocortisone tablets should be stored at room temperature (68°-77°F), fludrocortisone acetate (Florinef) should be stored at room temperature (between 59 and 86 degrees) and away from excess heat and moisture.

Injectable medication-Hydrocortisone Sodium Succinate (Act-o-Vials of Solu-Cortef or Solu-Medrol) should be stored at room temperature (68°-77°F), in a dry place protected from light. The powder must be reconstituted with the 2 ml of sterile water and should not be mixed until just before it is injected during an adrenal crisis emergency. The solution should only be used if it is clear.

### **Access**

Plans should be in place to ensure that medication is readily available and in proximity of the student. Consideration of transportation activities such as field trips or other off facility functions must be considered when planning emergency measures for possible treatment of adrenal crisis. Depending on the age of the child and school policies, it may be advisable for students to carry their own medication during these special activities and trained personnel must accompany the child.



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### **Materials needed**

Medication  
Syringe and injection needle  
Alcohol swab  
Cotton Ball or tissue  
Latex or nonsterile gloves  
Sharps container

### **Preparation of medication:**

**PRIOR TO ADMINISTERING MEDICATION CALL 9-1-1**

1. Assemble medication and check the expiration date.
2. Consider location where medication is to be injected. If the injection needs to be in the buttock or upper thigh, it will be necessary for the student to remove clothing. This should occur in a private location and steps should be taken to make the student as comfortable as possible. Consider having a blanket or curtain. It is recommended that two personnel be present if possible.
3. Wash hands
4. Put on gloves



5. Press down on plastic activator of the medication Act-o-Vial to force diluent into lower chamber
6. Gently mix the solution by turning the vial upside down several times and roll between hands. Do not shake. (The solution is initially cloudy but then clears. If the solution does not get clear, do not administer and wait for rescue personnel to arrive.)
7. Remove the plastic tab covering center of the stopper
8. Wipe the top of vial with alcohol swab
9. Take the cap off the syringe
10. Insert needle squarely through the center of the plunger-stopper until tip is just visible
11. Invert vial and withdraw required dose



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12. Change needle to an injection needle
13. Reassure the student and let them know what you are going to do
14. Uncover the area to be injected (upper thigh, buttock)
15. Use alcohol wipe to cleanse the injection site on the skin
16. Remove the cap from the needle. Hold the syringe like a dart.
17. Using the thumb and first two fingers, spread the skin while pushing down lightly
18. Dart the needle into the injection site, going straight in at 90-degree angle
19. Inject medicine into the site
20. Withdraw the syringe quickly and discard into a sharp's container
21. Using a cotton ball, cover and apply gentle pressure to site
22. Give additional reassurance to the student if necessary
23. Clean up and dispose of waste safely
24. Remove gloves

### **FOLLOW-UP AND CONSULTATION AFTER ADRENAL CRISIS EPISODE**

If medical assistance was not summoned, then call 9-1-1, or have someone do this for you. **DO NOT LEAVE THE STUDENT UNATTENDED.** Advise the dispatcher of the type of medication given. A student who is treated must be seen by physician. The student's health presentation may not immediately improve after the medication is given.

Once the student has been given emergency treatment for symptoms of adrenal crisis, the parent/guardian is notified.



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Certificate of Completion

This is to certify

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has successfully completed the educational training activity:

***Adrenal Insufficiency Training Program***

Training Program Developed by the Division of Elementary and Secondary Education in Collaboration with the Arkansas State Board of Nursing

This certificate provides documentation you received the approved Adrenal Insufficiency Training by the licensed Registered Nurse of the:

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School District

You successfully completed all aspects of training and demonstrated mastery in identified protocols and the skills in the administration of hydrocortisone sodium succinate.

Awarded by: \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

Signature of Licensed Registered Nurse



## Adrenal Insufficiency-Crisis Emergency Action Plan

Student Name: \_\_\_\_\_ Grade: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

Parent Name: \_\_\_\_\_ Contact Number: \_\_\_\_\_

Doctor Name: \_\_\_\_\_ Contact Number: \_\_\_\_\_

### Daily School Medication orders:

Medication	Dose	Route	Time

The student, when having the following symptoms, may self-administer a stress dose (oral hydrocortisone):

Following self-administration of the oral hydrocortisone, the student must notify the school nurse, teacher, or the administrator of the public school. A communication plan between these three key school personnel must be in place with an evaluation and follow-up for the care of the student.

The student is not capable of self-administration of oral hydrocortisone

*Adrenal insufficiency can result in acute crisis that can be a life-threatening state. The cause is insufficient levels of cortisol, a hormone produced and released by the adrenal gland. Administering an intramuscular injection (IM), hydrocortisone sodium succinate, increases the chance for a quick recovery. In situations where one or more of the risk factors are present, IM hydrocortisone sodium succinate is required. The RN will train and delegate volunteer school personnel for the administration of IM hydrocortisone sodium succinate when a school nurse is unavailable.*

If the student has one or more of the checked crisis signs or symptoms below:

- |  |  |
|--|--|
| <input type="checkbox"/> severe illness; vomiting, diarrhea                      | <input type="checkbox"/> chills  |
| <input type="checkbox"/> fever of $\geq 100$ degrees F                           | <input type="checkbox"/> irregular heartbeat/increased pulse or respirations |
| <input type="checkbox"/> shortness of breath                                     | <input type="checkbox"/> confusion/unconsciousness                           |
| <input type="checkbox"/> sudden, penetrating pain in lower back, abdomen or legs | <input type="checkbox"/> dehydration/heat exhaustion                         |
| <input type="checkbox"/> trauma/bleeding/fracture                                | <input type="checkbox"/> Other: _____  |

1. Administer emergency dose of IM hydrocortisone sodium succinate immediately!
2. Call 911
3. Call parent/guardian

Doctor Signature \_\_\_\_\_

Date \_\_\_\_\_

Parent Signature \_\_\_\_\_

Date \_\_\_\_\_

Nurse Signature \_\_\_\_\_

Date \_\_\_\_\_