

Addison's Disease

Background

Addison's disease, also known as primary adrenal insufficiency, is a chronic endocrine disorder where damage to the adrenal glands leads to decreased production of the hormones cortisol and aldosterone. The most common cause of Addison's disease in children is an autoimmune response attacking both adrenal glands. Other causes in children include bleeding into the adrenal glands, infection, cancer, and tuberculosis.

Cortisol: The body's main stress hormone. Cortisol helps regulate response to stress, illness, or injury. Cortisol also helps regulate other vital processes including metabolism, immune response, blood pressure, and glucose production.

Aldosterone: The hormone responsible for regulating salt and potassium in the blood. Aldosterone affects urinary output, blood volume, and blood pressure.

Onset of Addison's disease is usually gradual and generally characterized by steadily worsening fatigue. Early signs can also include salt cravings and weight loss. Other symptoms include:

- Generalized weakness
- Loss of appetite, weight loss
- Nausea, vomiting, diarrhea
- Muscle and joint pain
- Low blood sugar (hypoglycemia)
- Low blood pressure (hypotension)
- Darkening of the skin (bronze pigmentation)
- Emotional changes such as irritability or depression
- Headache
- Sweating
- Dizziness
- Craving salty foods
- Amenorrhea

Treatment for Addison's disease includes taking daily medications to replace the missing hormones (e.g., hydrocortisone, fludrocortisone). Salt may also need to be supplemented. During times of stress, higher doses of the medications may be necessary. Surgery may be an option for adrenal tumors or brain tumors that cause Addison's disease.



A life-threatening complication of Addison's disease is an Addisonian crisis, also known as an adrenal crisis. An adrenal crisis can occur during an illness or infection (e.g., cold or flu), injury (e.g., broken bone), exposure to stressful situation, or missing or stopping steroid medications.

Development of an emergency action plan for an adrenal crisis is necessary and should describe symptoms of an adrenal crisis which may include sudden onset of pain, severe nausea and vomiting, shock-like symptoms, seizures, or loss of consciousness.

Top Takeaways for School

Addison's disease is a chronic condition requiring lifelong daily hormone replacement medication.

Vomiting and diarrhea account for most adrenal crisis events since they interfere with the absorption of the student's daily hormone replacement medications.

An adrenal crisis is a potentially life-threatening emergency that can develop very suddenly in response to a traumatic physical or emotional stressor.

Staff working with the student should be trained on recognizing an adrenal crisis and implementing the student-specific emergency care plan. Staff may need training for administration of an emergency medication.

Considerations for the Individualized Healthcare Plan (IHP)

- Nursing diagnoses: Risk for injury related to decreased cardiac output, imbalanced nutrition: less than body requirements, risk for disturbed sensory perception, fatigue, alteration in coping
- Nutrition interventions and equipment (fluid intake goal and supplements)
- Student-specific triggers and prevention tips
- Consider emergency action plans (EAPs) and emergency evacuation plans (EEPs) related to special health care needs, including staff education/training

Discussion Starters for the Educational Team

1. Would the student benefit from evaluations or assessments in any of the following areas: physical therapy, occupational therapy, speech and language therapy, assistive technology, adapted physical education, functional behavior, psychology, hearing and vision?
2. Would the student benefit from additional academic support and/or modified education (e.g., copies of notes, extra time, reduced workload, simplified instructions, alternative formats for presentation of material, 504/IEP)?
3. Can rest breaks, safe spaces or reduced stimulation times be built into the student's schedule?
4. Does the student require activity precautions to prevent injury?
5. Will staff receive education/training to implement the student-specific emergency plan?

Resources

Adrenal Insufficiency United
aiunited.org/

National Adrenal Diseases Foundation
nadf.us/

Pediatric Adrenal Insufficiency Information - Pediatric Adrenal Insufficiency
pediatricadrenalinsufficiency.com/



For more information, please scan the QR code or visit: KennedyKrieger.org/SHNIC

