Hyponatremia

E87.1 Hypo-osmolality and hyponatremia

Diagnosis: hyponatremia/hypo-osmolality/hypotonic dehydration

Discussion

Hyponatremia is decreased sodium level in the blood. Serum osmolarity is low in true hyposmolar hyponatremia. It occurs from a loss of total body sodium or dilution of serum sodium due to excess water in plasma. The latter mechanism is the most common cause of hyponatremia. The lowered sodium level allows excess water to enter cells, causing them to swell.

Infancy, advanced age, debilitation, long-term care residency, impaired mental status, brain injury status, and hospitalization are high-risk factors for developing hyponatremia. Identification of the underlying cause is important in the management. The efficacy of treatment is influenced by the onset; acute hyponatremia has a rapid drop of sodium level < 48 hours. The results can cause critical physiologic effects. Acute hyponatremia that is severe should be corrected slowly, with increase in serum Na concentration not exceeding 10 mEq/L over the first 24 hours; chronic hyponatremia has a gradual drop of sodium level over several days (> 48 hours) or weeks. The results are usually moderate; can be asymptomatic. When it is symptomatic, it should be corrected slowly due to the risk of cerebral edema during treatment. Treatment variables depend on whether the hyponatremia is acute or chronic, the classification (fluid balance), and severity of the symptoms, the patients’ weight (use in formulae) and the underlying cause.

Further classification of hypotonic hyponatremia by extracellular fluid volume status and causes are:

- Hypovolemic: decreased total body Na+ to a greater extent than total body water (TBW) decrease (without presence of edema)
  - vomiting/diarrhea
  - excess sweating
  - burns
  - excessive blood loss
  - acute on chronic renal insufficiency
  - ascites
  - peritonitis
  - pancreatitis
  - rhabdomyolysis
  - small bowel obstruction
  - diuretics
  - TBI/ruptured brain aneurysm/intracranial surgery with cerebral salt wasting syndrome
  - exercise-induced (exertional) hyponatremia
  - Grand Canyon hiker’s hyponatremia

Documentation Tip

Code assignment cannot be based on ancillary test results, therapies, or clinical criteria alone. A diagnosis and its clinical significance must be supported by physician or other qualified healthcare professional documentation. When it is unclear or there is contradictory information, query the physician or other qualified healthcare professional for clarification.
Hyponatremia: Total body Na+ near normal with TBW increase (without presence of edema)
- syndrome of inappropriate secretion of antidiuretic hormone (SIADH)
- cortisol deficiency
- hypothyroidism
- psychogenic polydipsia
- drugs
- iatrogenic administration of hypotonic fluids
- iatrogenic bowel prep
- water intoxication (delusional hyponatremia); infants at high risk; fraternity hazing; over-hydration with ecstasy use

Hypervolemia: total body Na+ increase with TBW increase to a greater extent (edema present)
- congestive heart failure
- cirrhosis
- nephrotic syndrome/kidney failure
- beer potomania
- medication induced

There are several conditions that result in a low serum sodium level, but are not true hyponatremia:

Redistribution or translocational hyponatremia: hypertonic; serum osmolarity is normal or elevated: dilution of serum sodium due to glucose causing water shift from the intracellular space to the extracellular space. It corrects as normoglycemia is re-established.
- extreme hyperglycemia (hypovolemic)
- administration of glycerol or mannitol
- administration of radiocontrast agents in advanced renal disease

Pseudohyponatremia: serum osmolarity is normal; serum is diluted with excessive proteins or lipids; a decrease in plasma water fraction
- use of flame emission spectrophotometry or indirect potentiometry used to assay serum sodium levels
- hypertriglyceridemia
- hyperlipidemia
- multiple myeloma with hyperproteinemia

Excluded
SIADH (syndrome of inappropriate secretion of antidiuretic hormone), see E22.2 Syndrome of inappropriate secretion of antidiuretic hormone.

When both dehydration and hyponatremia are documented, query the provider if the relationship between the dehydration and hyponatremia can be linked or be further specified.

Reporting dehydration with hypernatremia or hyponatremia requires two codes: E86.0 and either E87.0 or E87.1.

Documentation Tip
The ↑ and ↓ symbols do not indicate a diagnosis. Query the provider as to the meaning and if it represents a diagnosis, request that the information be fully stated, including the clinical significance.
Hyponatremia

**Coding Tip**
Hyponatremia in newborn is reported with P74.22 Hyponatremia of newborn.

**References**

AHA Coding Clinic  
*The Merck Manual*  
MLN Matters  
*DRG Expert, 2019 Edition, Optum360*  
*ICD-10-CM Clinical Documentation Improvement Desk Reference, 2019 Edition, Optum360*  
*ICD-10-CM Official Guidelines for Coding and Reporting, 2019*
<table>
<thead>
<tr>
<th>Coding/Reporting Criteria</th>
<th>Clinical Criteria</th>
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<tbody>
<tr>
<td><strong>1. Physical Evaluation</strong>&lt;br&gt;(routine/expected in italics)</td>
<td>• Asymptomatic&lt;br&gt; • Headache&lt;br&gt; • Anorexia&lt;br&gt; • Nausea/vomiting (peristalsis may be palpated or seen)&lt;br&gt; • Lethargy&lt;br&gt; • Fatigue&lt;br&gt; • Restlessness/irritability&lt;br&gt; • Muscle weakness, cramps, spasms&lt;br&gt; • Fluid overload&lt;br&gt; • Metabolic encephalopathy&lt;br&gt; • Seizure&lt;br&gt; • Cerebral edema&lt;br&gt; • Intracranial pressure (ICP)&lt;br&gt; • Tentorial brain herniation/compression&lt;br&gt; • Obtundation&lt;br&gt; • Coma&lt;br&gt; • Noncardiogenic pulmonary edema&lt;br&gt; • Respiratory arrest&lt;br&gt; • Infant:&lt;br&gt;   • changes in mental status&lt;br&gt;   • low body temperature ≤ 97°&lt;br&gt;   • facial swelling/puffiness&lt;br&gt;   • seizure&lt;br&gt;   • with dehydration: fewer than 3 wet diapers in 24 hours&lt;br&gt; • Hypovolemic&lt;br&gt;   • dry mucous membranes&lt;br&gt;   • tachycardia&lt;br&gt;   • poor skin turgor&lt;br&gt;   • orthostasis&lt;br&gt; • Hypervolemia:&lt;br&gt;   • pulmonary rales/edema&lt;br&gt;   • S3 gallop&lt;br&gt;   • jugular venous distention&lt;br&gt;   • peripheral edema&lt;br&gt;   • ascites&lt;br&gt; • Severe acute:&lt;br&gt;   • fixed, unilateral, dilated pupil&lt;br&gt;   • decorticate/decerebrate posturing&lt;br&gt;   • acute, severe hypertension&lt;br&gt; • Chronic:&lt;br&gt;   • status epilepticus&lt;br&gt;   • osmotic demyelination syndrome (cerebral pontine myelinolysis)</td>
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<tr>
<td><strong>2. Clinical Evaluation</strong>&lt;br&gt;(routine/expected in italics)</td>
<td>• Serum sodium (Na⁺): &lt; 136 mEq/L (severe &lt; 109-120 mEq/L)&lt;br&gt; • Serum osmolality: low in hyposmolar hyponatremia; normal in pseudohyponatremia; normal or elevated in hypertonic hyponatremia-hyperglycemic&lt;br&gt; • Serial measurements of serum sodium to monitor/adjust treatment&lt;br&gt; • Serum electrolytes&lt;br&gt; • Glucose level&lt;br&gt; • Urea&lt;br&gt; • Creatinine&lt;br&gt; • Thyroid stimulating hormone (TSH)/free thyroxine levels&lt;br&gt; • Height/weight measurement; calculation of body fluid requirements; changes in daily weight indicate fluid loss or gain (1 lb Δ = 500 ml fluid volume Δ)&lt;br&gt; • Measure intake/output&lt;br&gt; • Urine/plasma osmolality/sodium levels&lt;br&gt; • Urine electrolytes&lt;br&gt; • 24-hour urine volume&lt;br&gt; • Plasma arginine vasopressin level (if indicated)&lt;br&gt; • Adrenal function</td>
</tr>
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</table>
### Coding/Reporting Criteria | Clinical Criteria
---|---
#### 3. Diagnostic Px  
*(routine/expected in italics)*  
- Serial neurologic exams
- Chest x-ray: underlying cause
- CT brain with neurological symptoms

#### 4. Therapeutic Tx  
*(routine/expected in italics)*  
- Untreated *(chronic and asymptomatic)*
- Treatment of the underlying disorder
- Diet induced: change in diet/habits
- Infants: breast milk or formula that is not over-diluted; avoid straight water and electrolyte enriched pediatric drinks for routine hydration
- Diet therapy with oral fluid restriction: small adjustments in mild cases
- Oral fluid hydration therapy: restriction of free water
- Place patient in an upright position
- Diuretics
- Vasopressin
- ACE inhibitor in CHF
- Chronic: 3% hypertonic saline
  - \(< 10–12 \text{ meg/L over 24 hours}\)
  - \(< 18 \text{ mEq/L over 48 hours}\)
  - \(8 \text{ mEq/L for first 24 hours}\)
- Acute/severe:
  - hypertonic saline or vasopressin initially to increase Na by 1–2 mEq/L per hour until Na = 125 mEq/L or s/s diminish
- IV fluid (H2O with saline) with electrolytes
  - hypovolemic; 0.9% saline
  - hypervolemic: fluid restriction; diuretic as indicated
  - Euvolemic: treatment of cause
- Adrenal gland insufficiency: hormone replacement
- Dialysis (volume overload)
- Intubation/vent

#### 5. Increased Nursing Care and/or Monitoring  
- Development of drug induced hyponatremia, monitor Na+ levels; treated

#### 6. Extends LOS  
- Discharge delayed due to hyponatremia due to (stated cause)
<table>
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<tr>
<th>Condition</th>
<th>Coding Guideline</th>
<th>Documentation Example</th>
<th>ICD-10-CM Corresponding Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Routine/Expected/Integral/Inherent/Incidental (italics only)</strong></td>
<td>OCG: III.B</td>
<td>1. <strong>Progress Note</strong>: Chronic hyponatremia, asymptomatic, untreated.</td>
<td>1. No code assigned.</td>
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<tr>
<td><strong>Principal Diagnosis</strong></td>
<td>OCG: I.C.18.b.; I.C.19.e.5.a.; II.A AHA CC: 1Q, 2014, pg 7</td>
<td>1. IP: Admit due to encephalopathy secondary to hyponatremic dehydration, begin IV hydration NS. 2. IP: Admit due to psychogenic polydipsia induced hyponatremia with acute exacerbation of chronic paranoid schizophrenia; once hyponatremia is corrected, transfer to psych IP.</td>
<td>1. Report E87.1 Hypo-osmolality and hyponatremia, followed by E86.0 Dehydration, and G93.41 Metabolic encephalopathy. The underlying cause of the encephalopathy is the hyponatremic dehydration and it is the focus of treatment. 2. Report E87.1 Hypo-osmolality and hyponatremia, followed by R63.1 Polydipsia. As a chapter 18 code, R63.1 would not be sequenced as principal diagnosis since the definitive diagnosis that warranted admission and treatment is E87.1.</td>
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<td><strong>Comorbidity</strong></td>
<td></td>
<td>1. <strong>Progress Note</strong>: ↓Na, continue treatment. (Query the meaning of ↓Na and its clinical significance, noting it is under treatment and any associated lab values as documented by the provider.)</td>
<td>1. Codes cannot be assigned based on arrows as the only documentation.</td>
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<td><strong>Complication of Care</strong></td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<td><strong>Poisoning or Adverse Effect of Medication/Chemical</strong></td>
<td>OCG: I.C.19.e.5.a-b</td>
<td>1. IP: Admit due to thiazide-induced hyponatremia, sodium level 130, patient compliant with regimen.</td>
<td>1. Report E87.1 Hypo-osmolality and hyponatremia, followed by T50.2X5A Adverse effect of carbonic-anhydrase inhibitors, benzothiadiazides and other diuretics, initial encounter.</td>
</tr>
</tbody>
</table>
Hyponatremia Example

Request for Documentation Clarification

THIS FORM IS A PERMANENT PART OF THE MEDICAL RECORD

Dear Physician/PA/NP: _____________________________ or other responsible provider:

When responding to this query, please exercise your independent professional judgment. The fact that a question is asked does not imply that any particular answer is desired or expected. Please complete, sign, date, and time the query. Thank you for your assistance with clarification of this issue.

Please clarify the following documentation or clinical data noted in the medical record:

Progress note indicates sodium decreased at 129, decrease fluid intake and change IV fluids to normal saline and monitor. Initial laboratory finding of serum sodium of 147; repeat value down to 140.

CDI Analyst/Coder: _________________________________________ Date: _______________ Time: _______________

MD/PA/NP Response (Check any that apply.)

Based on your medical judgment and review of the clinical indicators above, please clarify the clinical significance of the laboratory finding and/or diagnosis.

- [ ] Hyponatremia
- [ ] Hypernatremia
- [ ] Clinically insignificant laboratory finding
- [ ] Unable to determine
- [ ] Other ___________________________________________

Physician/PA/NP Printed Name: __________________________________________________________________________

Physician/PA/NP Signature: __________________________________ Date: _______________ Time: ______________