Lithium has a narrow therapeutic index and is monitored via serum levels every 1 to 3 days when beginning therapy, and every 2 to 3 months thereafter. To ensure therapeutic action, concentrations of lithium in the blood must remain within the range of 0.6 to 1.5 mEq/L. Close monitoring encourages compliance and helps prevent toxicity. Lithium acts like sodium in the body, so conditions in which sodium is lost (e.g., excessive sweating or dehydration) can cause lithium toxicity. Lithium overdose may be treated with hemodialysis and supportive care. Baseline studies of renal, cardiac, and thyroid status are indicated, as well as baseline electrolyte studies.

It is not unusual for other drugs to be used in combination with lithium for the control of bipolar disorder. During a client’s depressed stage, a tricyclic antidepressant or bupropion (Wellbutrin) may be necessary. During the manic phases, a benzodiazepine will moderate manic symptoms. In cases of

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### NURSING PROCESS FOCUS  Clients Receiving Lithium (Eskalith)

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Potential Nursing Diagnoses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to administration:</td>
<td>• Violence: Self-directed, Risk for</td>
</tr>
<tr>
<td>• Obtain complete health history including allergies, drug history, and possible</td>
<td>• Thought Processes, Disturbed</td>
</tr>
<tr>
<td>drug interactions.</td>
<td>• Sleep Pattern, Disturbed</td>
</tr>
<tr>
<td>• Assess mental and emotional status, including any recent suicidal ideation.</td>
<td>• Fluid Volume, Imbalanced, Risk for</td>
</tr>
<tr>
<td>• Obtain cardiac history (including ECG and vital signs); renal and liver disorders, and blood studies: glucose, BUN, creatinine, electrolytes, and liver enzymes.</td>
<td>• Self-Care Deficit: Dressing/Grooming</td>
</tr>
</tbody>
</table>

### Planning: Client Goals and Expected Outcomes

The client will:

• Demonstrate stabilization of mood, including absence of mania and suicidal depression.
• Remain safe from self-harm or harm directed toward others.
• Engage in normal activities of daily living and report subjective improvement in mood.
• Report ability to fall and stay asleep.
• Demonstrate an understanding of the drugs’ action by accurately describing drug side effects and precautions.

### Implementation

<table>
<thead>
<tr>
<th>Interventions and (Rationales)</th>
<th>Client Education/Discharge Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Monitor mental and emotional status. Observe for mania and/or extreme depression. (Lithium should prevent mood swings.)</td>
<td>• Instruct client to keep a symptom log to document response to medication.</td>
</tr>
</tbody>
</table>
| • Monitor electrolyte balance. (Lithium is a salt affected by dietary intake of other salts such as sodium chloride. Insufficient dietary salt intake causes the kidneys to conserve lithium, increasing serum lithium levels.) | Instruct client to:  
  • Monitor dietary salt intake; consume sufficient quantities, especially during illness or physical activity.  
  • Avoid activities that cause excessive perspiration.  
  • Increase fluid intake to 1 to 1.5 L per day.  
  • Limit or eliminate caffeine consumption (caffeine has a diuretic effect, which can cause lithium sparing by the kidneys). |
| • Monitor fluid balance. (Lithium causes polyuria by blocking effects of antidiuretic hormone.) | Instruct client to notify healthcare provider of excessive weight gain or loss, or pitting edema. |
| • Measure intake and output. Weigh client daily. (Short-term changes in weight are a good indicator of fluctuations in fluid volume. Excess fluid volume increases the risk of HF; pitting edema may signal HF.) | Instruct client to:  
  • Immediately report anuria, especially accompanied by lower abdominal tenderness, distention, headache, and diaphoresis.  
  • Inform healthcare provider of nausea, vomiting, diarrhea, flank pain or tenderness, and changes in urinary quantity and quality (e.g., sediment).  
  • Immediately report palpitations, chest pain, or other symptoms suggestive of myocardial infarction.  
  • Monitor vital signs properly using home equipment. |
| • Monitor renal status, CBC, differential, BUN, creatinine, uric acid, and urinalysis. (Lithium may cause degenerative changes in the kidney, which increases drug toxicity.) | Instruct client to:  
  • Immediately report anuria, especially accompanied by lower abdominal tenderness, distention, headache, and diaphoresis.  
  • Inform healthcare provider of nausea, vomiting, diarrhea, flank pain or tenderness, and changes in urinary quantity and quality (e.g., sediment).  
  • Immediately report palpitations, chest pain, or other symptoms suggestive of myocardial infarction.  
  • Monitor vital signs properly using home equipment. |
| • Monitor cardiovascular status, vital signs including apical pulse, and status. (Lithium toxicity may cause muscular irritability resulting in cardiac dysrhythmias or angina. Use with caution in clients with a history of CAD or heart disease.) | (Continued) |
extreme agitation, delusions, or hallucinations, an antipsychotic agent may be indicated. Continued client compliance is essential to achieving successful pharmacotherapy, because some clients do not perceive their condition as abnormal.

**NURSING CONSIDERATIONS**

The role of the nurse in lithium therapy involves careful monitoring of a client’s condition and providing education as it relates to prescribed drug treatment. Because lithium is a salt, clients with a history of cardiovascular and kidney disease should not take lithium. Clients frequently experience dehydration and sodium depletion; therefore, those on a low-salt diet should not be prescribed lithium. Assess for and identify signs and symptoms of lithium toxicity, which include diarrhea, lethargy, slurred speech, muscle weakness, ataxia, seizures, edema, hypotension, and circulatory collapse.

**Lifespan Considerations.** Lithium is contraindicated in pregnant and nursing women. It should also not be used by children younger than 12 years. It should be used with caution in older adults.

**Client Teaching.** Client education as it relates to lithium therapy should include the goals of therapy, the reasons for obtaining baseline data such as vital signs and the existence of cardiac and renal disorders, and possible drug side effects. Include the following points when teaching clients about lithium:

- Take medication as ordered, because compliance is the key to successful treatment.
- Keep all scheduled laboratory visits to monitor lithium levels.
- Do not change diet or decrease fluid intake, because any changes in diet and fluid status can affect therapeutic drug levels.
- Avoid alcohol use.
- Do not take other prescription medications, OTC drugs, or herbal products without notifying your healthcare provider.
- Do not stop taking this medication suddenly.
- Immediately report any increase in dilute urine, diarrhea, fever, or changes in mobility.
- Drink plenty of fluids to avoid dehydration.
- Practice reliable contraception and notify your healthcare provider if pregnancy is planned or suspected.

**ATTENTION DEFICIT–HYPERACTIVITY DISORDER**

A condition characterized by poor attention span, behavior control issues, and/or hyperactivity is called attention deficit–hyperactivity disorder (ADHD). Although the condition is normally diagnosed in childhood, symptoms of ADHD may extend into adulthood.

### 16.9 Characteristics of ADHD

ADHD affects as many as 5% of all children. Most children diagnosed with this condition are between the ages of 3 and 7 years, and boys are 4 to 8 times more likely to be diagnosed than girls.

ADHD is characterized by developmentally inappropriate behaviors involving difficulty in paying attention or focusing on tasks. ADHD may be diagnosed when the child’s hyperactive behaviors significantly interfere with normal play, sleep,

**PHARMFACTS**

**Attention Deficit–Hyperactivity Disorder**

- ADHD is the major reason why children are referred for mental health treatment.
- About half are also diagnosed with oppositional defiant or conduct disorder.
- About one fourth are also diagnosed with anxiety disorder.
- About one third are also diagnosed with depression.
- And about one fifth also have a learning disability.