<table>
<thead>
<tr>
<th>STRUCTURE OF CONCERN</th>
<th>EXAMINATION TECHNIQUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anterior cruciate ligament tear</td>
<td><strong>Lachman Test</strong> (Figure 37-2)</td>
</tr>
<tr>
<td></td>
<td>Knee bent to 30 to 45 degrees with relaxed hamstrings</td>
</tr>
<tr>
<td></td>
<td>Pull tibia forward relative to femur, assess end point</td>
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<tr>
<td></td>
<td>Lack of firm end point suggests incompetent anterior cruciate ligament</td>
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<tr>
<td></td>
<td><strong>Anterior Drawer</strong></td>
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<tr>
<td></td>
<td>Knee bent to 90 degrees</td>
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<tr>
<td></td>
<td>Sit on foot</td>
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<tr>
<td></td>
<td>Pull tibia forward relative to femur, assess anterior motion</td>
</tr>
<tr>
<td>Meniscal tear</td>
<td><strong>Duck Walk</strong> (Figure 37-3)</td>
</tr>
<tr>
<td></td>
<td>Patient squats (like catcher in baseball)</td>
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<td></td>
<td>Takes 5 steps forward (walks like a duck)</td>
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<tr>
<td></td>
<td>Catch, click, or focal pain implies meniscal tear</td>
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<tr>
<td></td>
<td><strong>Joint Line Tenderness</strong></td>
</tr>
<tr>
<td></td>
<td>Run finger along medial and lateral space between femur and tibia</td>
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<td></td>
<td>Pain suggests tear</td>
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<tr>
<td></td>
<td><strong>McMurray Test</strong> (Figures 37-4 and 37-5)</td>
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<tr>
<td></td>
<td>With patient supine, place finger on lateral or medial joint line</td>
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<td></td>
<td>Rotate knee into flexion with varus/valgus stress with finger on joint line</td>
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<td></td>
<td>Pain and click implies meniscal tear</td>
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<tr>
<td></td>
<td><strong>Apley Test</strong></td>
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<tr>
<td></td>
<td>Patient lies on stomach with knee bent 90 degrees</td>
</tr>
<tr>
<td></td>
<td>Examiner places hand on heel to push tibia against femur</td>
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<tr>
<td></td>
<td>Internally and externally rotate heel</td>
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<td></td>
<td>Pain or click implies meniscal tear</td>
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<tr>
<td>Patellar instability (dislocation or subluxation)</td>
<td><strong>Visual Examination</strong></td>
</tr>
<tr>
<td></td>
<td>Dislocated patella located adjacent to lateral femoral condyle</td>
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<td></td>
<td><strong>Apprehension Test</strong> (see Figure 38-2)</td>
</tr>
<tr>
<td></td>
<td>Patient supine, knee bent 30 degrees</td>
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<tr>
<td></td>
<td>Place thumbs on medial border of patella</td>
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<td></td>
<td>Push patella laterally</td>
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<tr>
<td></td>
<td>Patient pain or apprehension indicates patellar instability</td>
</tr>
<tr>
<td>Medial collateral ligament tear</td>
<td>With patient supine and knee extended</td>
</tr>
<tr>
<td></td>
<td>Apply valgus stress test (pull lower leg away from other leg) at full extension</td>
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<tr>
<td></td>
<td>and 30 degrees of flexion, compare laxity with noninjured knee (Figure 37-6)</td>
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<tr>
<td></td>
<td>Laxity in full extension implies injury (not just to medial collateral ligament,</td>
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<tr>
<td></td>
<td>but also to other medial or posteromedial structures [indicates immediate referral]</td>
</tr>
<tr>
<td></td>
<td>Laxity only at 30 degrees of flexion implies isolated medial collateral ligament</td>
</tr>
<tr>
<td>injury</td>
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</table>