

SCOLIOSIS	
DIAGNOSIS/CAUSE	<ul style="list-style-type: none"> <li>• 85% cases idiopathic (no cause) <ul style="list-style-type: none"> <li>◦ May have some genetic influence</li> </ul> </li> <li>• 2-4% adolescents</li> <li>• &gt;10 degrees lateral curve of spine with rotation</li> <li>• Don't really have pain</li> </ul>
EXAMINATION	<ul style="list-style-type: none"> <li>• Adam's test <ul style="list-style-type: none"> <li>◦ Bend forward → rib hump deformity</li> </ul> </li> <li>• X-ray and calculation of Cobb angle (&gt;10 degrees)</li> <li>• Structural vs functional curves <ul style="list-style-type: none"> <li>◦ Functional curves will not produce rib prominence on Adams test and will reduce during flexion or side flexion</li> <li>◦ Functional: will correct when bending</li> <li>◦ Scoliosis: that section of spine will stay in locked <b>structural</b> position and won't correct out</li> </ul> </li> </ul>
MANAGEMENT	<ul style="list-style-type: none"> <li>• Exercise → limited evidence not recommended</li> </ul>

SCHEUERMANN'S KYPHOSIS	
PREVALENCE AND PRESENTATION	<ul style="list-style-type: none"> <li>•</li> <li>• Juvenile osteochondrosis</li> <li>• Defect in vertebral endplate → Causes wedging of vertebral bodies → narrow at front → kyphotic effect on spine</li> <li>• Common in boys <ul style="list-style-type: none"> <li>◦ 12-14 years</li> </ul> </li> <li>• Affects most of thoracic spine</li> <li>• Increased risk of pain in adulthood and some level of functional difficulty</li> <li>• Adults with thoracic pain may have had Scheuerman in adolescence</li> </ul>
	<p>SCHEUERMANN'S IN ADULTHOOD:</p> <ul style="list-style-type: none"> <li>• Pain associated with scheuermann's kyphosis deformity</li> <li>• It is a growth related problem so they don't</li> </ul>

	<p>have it anymore → end up with a non-specific pain</p> <ul style="list-style-type: none"> <li>• Most curves don't become severe like scoliosis</li> <li>• No neural or pulmonary compromise</li> <li>• Can get pain in adjacent spinal regions <ul style="list-style-type: none"> <li>○ Lumbar, cervical</li> </ul> </li> </ul> <p><b>Management:</b></p> <ul style="list-style-type: none"> <li>• Physio unlikely to lessen deformity</li> <li>• Consider: posture, manual therapy, improve ROM, strengthen extensors, general exercise</li> <li>• <i>Some evidence for pain reduction generally ongoing self management</i></li> <li>• Curve &gt;60 degree → not common but may need surgical intervention</li> </ul>										
DIAGNOSIS	<ul style="list-style-type: none"> <li>• Vertebral wedging (&gt;5 degrees at 3 or more)</li> <li>• Vertebral end irregularities</li> <li>• Schmorl's nodes <ul style="list-style-type: none"> <li>○ Irregularities within vertebral body</li> <li>○ Disc material protrudes through end plate into vertebral body</li> <li>○ <i>a bulge (protrusion) of the jelly-like contents of the vertebral disc into the growth cartilage of bone (vertebra) above or below the disc.</i></li> </ul> </li> </ul> <p><b>Scheurmanns vs normal kyphosis</b></p> <ul style="list-style-type: none"> <li>• Is a more general curve</li> <li>• Is more flexible</li> <li>• Has no image findings</li> </ul>										
MANAGEMENT	<p>Depends on age and severity</p> <table border="1"> <thead> <tr> <th>Severity</th><th>Management</th></tr> </thead> <tbody> <tr> <td>Normal = 20-40°</td><td></td></tr> <tr> <td>Mild (&lt; 60 degrees)</td><td>Monitor, advice, posture, exercise (eg. trunk ROM and strengthening – RCTs lacking. )</td></tr> <tr> <td>moderate</td><td>Bracing, exercise</td></tr> <tr> <td>Severe (&gt; 70-75 degrees)</td><td>May require surgery (uncommon)</td></tr> </tbody> </table>	Severity	Management	Normal = 20-40°		Mild (< 60 degrees)	Monitor, advice, posture, exercise (eg. trunk ROM and strengthening – RCTs lacking. )	moderate	Bracing, exercise	Severe (> 70-75 degrees)	May require surgery (uncommon)
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COSTOCHONDRITIS AND COSTAL CARTILAGE INJURIES		
If cases present with anterior thoracic pain it could be the following		MANAGEMENT
COSTOCHONDRITIS	<ul style="list-style-type: none"><li>● Costochondritis have traumatic onset or less obvious onset<ul style="list-style-type: none"><li>○ Repetitive strenuous activities</li><li>○ Viral coughing episodes</li><li>○ Idiopathic</li></ul></li><li>● Causes chest pain so may be mistaken for heart at ED</li><li>● Chest pain + mechanical behaviour</li><li>● Sharper pain than cardiac</li></ul>	<ul style="list-style-type: none"><li>● Time</li><li>● Pain meds/NSAIDS</li><li>● Physio can play a role in improving thoracic and shoulder girdle motion in some cases</li></ul>
COSTAL CARTILAGE INJURY	<ul style="list-style-type: none"><li>● Costal cartilage attach to rib → can be irritated by trauma</li><li>● Chest pain + mechanical behaviour</li><li>● Sharper pain than cardiac</li><li>● Tenderness anteriorly in the ribs and costal cartilages or sternocostal<ul style="list-style-type: none"><li>○ Palpate anteriorly</li></ul></li></ul>	
RIB FRACTURE	<ul style="list-style-type: none"><li>● Pain and tenderness at rib levels</li><li>● Look at MOI</li><li>● Refer to scanning</li></ul>	
NERVE ROOT	<ul style="list-style-type: none"><li>● Neuro symptoms</li><li>● P &amp; N</li><li>● sensory/muscle weakness?</li></ul>	
REFERRED SOMATIC - THORACIC SPINE	<ul style="list-style-type: none"><li>● Screen for visceral</li></ul>	