Hyperlaxity
Joint laxity
Joint hypermobility
Range of motion of a joint is more than normal
Diagnostic criteria

Wynne-Davies criteria (at least 3)

1. Elbow extension beyond straight
2. Ability to touch the thumbs to the forearm passively on wrist flexion
3. Fingers that lie parallel to the forearm on passive extension of the of the wrist
4. Passive ankle dorsiflexion > 45
5. Knee extension beyond straight
Classification

1. Physiological
2. Generalized
3. Inherited joint laxity syndromes
4. Inherited CT diseases
5. Joint laxity in skeletal dysplasia and dwarfism
6. Acquired joint laxity
Physiological joint laxity

- Neonates
- Pregnancy
Generalized joint laxity

- Asians > Africans > Caucasians
- Females > males
- Decrease with age

Disadvantages
- Predisposed to traumatic and overuse lesions
- Joint instability
- Joint arthritis
- Other organ involvement
Generalized joint laxity

Disadvantages
- Predisposed to traumatic and overuse lesions
- Joint instability
- Joint arthritis
- Other organ involvement
Inherited joint laxity syndromes

Ehler - Danlos syndrome
Inherited CT diseases

- Marfan syndrome
- Marfanoid hypermobility
- Achard syndrome (Arachnodactyly + hyperlaxity of hands and feet only)
- OI
- Larsen syndrome
Joint laxity in skeletal dysplasia and dwarfism

- Spondyloepiphysial dysplasia with hyperlaxity
- Pseudoachondroplasia
- Morquio syndrome
- Others
Acquired

- Steroid therapy
- Chronic renal failure
- SLE
**Management**

- Splints
- Stabbing
- Muscle strengthening programme

**Surgery**
- Bony surgeries is better then soft tissue
Ehlers-Danlos Syndrome

diseases caused by a variety of defects in collagen metabolism
hyperelasticity of the skin.

Palm and sole

hyperextensibility of skin,
Joint hypermobility,
easy bruising,
soft tissue and bony fragility,
calcification of soft tissues, and varying degrees of osteopenia are also present
Bleeding gums
<table>
<thead>
<tr>
<th>Type</th>
<th>Mutation</th>
<th>Inheritance</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>I (gravis or classic)</td>
<td>Unknown</td>
<td>AD</td>
<td>Lax, fragile skin and lax joints</td>
</tr>
<tr>
<td>II (mitis or mild)</td>
<td>Unknown</td>
<td>AD</td>
<td>Mild type I features</td>
</tr>
<tr>
<td>III (benign hypermobility)</td>
<td>Unknown</td>
<td>AD</td>
<td>Severe hypermobility with multiple dislocations</td>
</tr>
<tr>
<td>IV (ecchymotic)</td>
<td>Type III collagen</td>
<td>AD/AR</td>
<td>Vascular fragility, thin skin, and hypermobility</td>
</tr>
<tr>
<td>V (X-linked)</td>
<td>Unknown</td>
<td>X-linked</td>
<td>Type II features</td>
</tr>
<tr>
<td>VI (ocular-scoliotic)</td>
<td>Lysylhydroxylase</td>
<td>AR</td>
<td>Skin laxity, ocular fragility, and scoliosis</td>
</tr>
<tr>
<td>VII (arthrochalasis multiplex)</td>
<td>Type I collagen</td>
<td>AD/AR</td>
<td>Multiple joint dislocations and mild skin laxity</td>
</tr>
<tr>
<td>VIII (periodontitis)</td>
<td>Type III collagen</td>
<td>AD</td>
<td>Skin and joint laxity with periodontitis</td>
</tr>
<tr>
<td>IX (occipital horn syndrome)</td>
<td>Copper metabolism</td>
<td>X-linked</td>
<td>Skin laxity</td>
</tr>
<tr>
<td>X (fibronecnectin abnormality)</td>
<td>Unknown</td>
<td>AR</td>
<td>Skin laxity and easy bruising</td>
</tr>
</tbody>
</table>