Pins & Wires – a brief guide to identification!

**Hard or Soft?**

‘Soft’ wire is cerclage wire, also known as orthopaedic wire. This is malleable, so can be twisted as is required to tighten cerclage wires used in surgical fracture repairs & tension wire banding and is relatively easy to cut. It is available in rolls or on reels, in a range of sizes. The most useful is 1mm.

![Cerclage wire tightening](image)

- **Correct twist**
- **Incorrect twist – this will break!**

‘Hard’ wires include Arthrodesis wires, Kirschner wires, Steinman pins and small fragment pins. These are stiffer and much harder to cut than the soft orthopaedic wire. This is the group of pins which cause most confusion, & are the main focus of this guide.

**Types of hard wire / pin**

Pins & wires vary, other than diameter & length, in shape of point & type of thread (if any).

**Point types:**

Commonest is the TROCAR point. This has 3 facets, so 3 cutting edges coming to a sharp point. Trocar points themselves vary in shape. A long trocar point is easier to insert & causes less heat on insertion than a short stubby trocar. These points are found on Steinman intramedullary pins, Arthrodesis wires & external fixator pins.

![Trocar tip on Steinman intramedullary pin](image)

- **Trocar tip on Steinman intramedullary pin – 300mm long**

![Tip on threaded Steinman intramedullary pin](image)
Bayonet points are found on Kirschner wires, and are flattened with 2 cutting edges coming to a point.

![Bayonet point on Kirschner wire. Other end is usually blunt](image)

<table>
<thead>
<tr>
<th>Name of pin</th>
<th>Point</th>
<th>Thread?</th>
<th>Size range</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steinman intramedullary</td>
<td>Trocar both ends</td>
<td>Threaded on 1 end, plain trocar other or plain trocar both ends</td>
<td>1.6mm-8.0mm</td>
<td>300mm</td>
</tr>
<tr>
<td>Arthrodesis wire</td>
<td>Trocar both ends</td>
<td>Usually none – available with fine thread at 1 end</td>
<td>0.9-2.0mm</td>
<td>125mm (most common) &amp; 178mm</td>
</tr>
<tr>
<td>Kirschner wire</td>
<td>Bayonet 1 end, blunt other</td>
<td>No</td>
<td>0.9-2.0mm</td>
<td>125mm (most common) &amp; 178mm</td>
</tr>
<tr>
<td>Threaded small fragment pin</td>
<td>Trochar 1 end, blunt other</td>
<td>Yes – relatively coarse. Thread length from 5-20.. in 5mm increments</td>
<td>2.0mm</td>
<td>125m</td>
</tr>
</tbody>
</table>