Scoliosis used to be treated with casts and traction
Now, we use casts and traction
Halo Traction as an Adjunct to Scoliosis Treatment
Gary Larson Approach to Halo Traction

Like most veterinary students, Doreen breezes through chapter 9.
It is really easy to decide

<table>
<thead>
<tr>
<th>Problem</th>
<th>Treatment</th>
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</thead>
<tbody>
<tr>
<td>Severe Curve</td>
<td>✓ Halo Traction</td>
</tr>
<tr>
<td>Poor Nutrition</td>
<td>✓ Halo Traction</td>
</tr>
<tr>
<td>Poor Lung Function</td>
<td>✓ Halo Traction</td>
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<tr>
<td>Young age</td>
<td>✓ Halo Traction</td>
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<tr>
<td>Dystrophic NF</td>
<td>✓ Halo Traction</td>
</tr>
<tr>
<td>Complex Social Situation</td>
<td>✓ Halo Traction</td>
</tr>
<tr>
<td>Can’t Figure Out What to Do</td>
<td>✓ Halo Traction</td>
</tr>
<tr>
<td>Bad Kyphosis</td>
<td>✓ Halo Traction</td>
</tr>
<tr>
<td>Need lots of consults that you cannot get</td>
<td>✓ Halo Traction</td>
</tr>
</tbody>
</table>

![Cartoon of doctors treating a horse]
Large Curves – Especially in Young Children
Pulmonary Failure
Cannot Get Nutrition Controlled
Hard to know what to do
Casting could not correct the kyphosis
Halo Txn, growth rods, Halo Milwaukee
Infected and Failed “Growth Friendly” Instrumentation
Three Basic Techniques

• Halo Gravity
• Halo Pelvic
• Halo Femoral
  – My experience is primarily with the first except intraop with the last
What are the keys to safe halo traction?
Halo Application

• Lots of Pins
  – Infants 12 at 1 in-lb
  – Adults 4 at 8 in-lb
  – Split the difference for the rest, but err on “more is better”

• If the head is misshaped, size halos beforehand

• Need halos with pin sites in the back
Halo Gravity Technique

• Try to pick a technique where the patient can relieve excessive pull if needed
• Weights (most dangerous – no relief)
• Fish scale – works well
• Linkage
Halo Gravity Modified

- Copied TSRH Technique
- John Emans and crew now put a Halo Brace on with the traction to keep stable when out of the traction
- We use a soft cervical collar, but I like their thoughts
A Good Team

- Pediatric Nurse Practitioner
- Orthotic
- Pediatric PT
- Social Work
- Regular nursing in-services
Method

- Start with 5-10 lbs depending on size
- Increase 1-2 lbs per day up to ~50% body weight
- Regularly Check Cranial Nerves – Especially VI
- Watch for Hypertension
- Periodic C-spine x-rays looking for over-distraction
- In reliable families, can do at home once up to weight
Halo traction – a very cool tool