

Best Practice Guidelines

Adolescent Idiopathic Scoliosis (AIS) Bracing Checklist

INITIATING

MONITORING

DISCONTINUING

Bracing Indications:

- No role for bracing curves ≤ 15 or $\geq 60^\circ$
- No role for bracing skeletally mature patients (Risser Sign 5, Sanders Stage 7, no growth remaining)

Brace Prescription:

- Choose rigid braces (e.g. Rigo Chêneau-type brace, Boston Style Orthosis) over non-rigid braces (e.g. SpineCor)
- Brace high-risk patients ≥ 18 hours per day
- Do NOT brace any patients < 6 hours per day
- Monitor brace compliance with electronic sensors

Physical Activities/PSSE:

- Recommend sports and physical activities
- Instruct patient to remove brace for activities
- Consider prescribing PSSE where available
- PSSE is not a substitute for bracing when bracing is indicated

X-rays:

- Utilize low-dose biplanar radiography over plain radiographs when available
- Evaluate skeletal maturity with Sanders staging
- Correct leg length discrepancies when taking x-rays
- Obtain frontal and sagittal in-brace x-rays 4-6 weeks from brace delivery
 - Consider a 2-6 week brace break-in period prior to the in-brace radiograph
- Measure biggest residual coronal Cobb angle and evaluate sagittal parameters in-brace
- If a properly worn brace is unable to achieve meaningful curve correction, modify or remake the brace

X-rays Continued:

- Take all subsequent follow-up x-rays out of brace
 - Remove the brace at least 1 hour prior to the x-ray
 - Take x-rays of patients undergoing their rapid growth phase (Sanders 3 or 4) every 4-6 months
 - Take x-rays of patients outside of their rapid growth phase every 6-12 months

Discontinuing Bracing:

- Consider Sanders stage, Risser sign, change in height, curve progression, and curve magnitude when discontinuing
- When discontinuing, wean the brace for a minimum of 6 months

The primary goal of bracing therapy in AIS is to prevent or limit curve progression (including progression to surgery) in the growing child.

Reference:

Roye, BD, Simhon, ME, Matsumoto, H, et al. Establishing consensus on the best practice guidelines for the use of bracing in adolescent idiopathic scoliosis. *Spine Deformity*. 2020; 8(1):597-604.

<https://doi.org/10.1007/s43390-020-00060-1>