

# Recommendations for Patients and Families After Growing Rod Surgery: Surgeons Agreement on Post-operative Care

Nima Kabirian, MD; Gregory M. Mundis, MD; Patricia Kostial, RN, BSN;  
Burt Yaszay, MD; Jayla Kyaw, BS; Jeff B. Pawelek, BS; Behrooz A. Akbarnia, MD

*6<sup>th</sup> International Congress on Early Onset Scoliosis, Dublin, Ireland. November 15-16, 2012*



SAN DIEGO CENTER  
FOR SPINAL DISORDERS



UNIVERSITY of CALIFORNIA  
SAN DIEGO

# Disclosures

Author	Disclosure
<b>Nima Kabirian</b>	No relationship
<b>Gregory M Mundis</b>	(a) DePuy; (b) K2M, NuVasive (a,b,d)
<b>Patricia Kostial</b>	No relationship
<b>Burt Yaszay</b>	(a) DePuy; (b) K2M, Orthopaedics; DePuy; (d) DePuy; K2M; (e) Orthopaedics
<b>Jayla Kyaw</b>	No relationship
<b>Jeff Pawelek</b>	No relationship
<b>Behrooz A Akbarnia</b>	(a) K2M, DePuy, Nuvasive, Growing Spine Foundation (b) K2M, Ellipse, Kspine, DePuy, Nuvasive (c) Ellipse, K Spine, Nuvasive

- a. Grants/Research Support
- b. Consultant
- c. Stock/Shareholder
- d. Speakers' Bureau
- e. Other Financial Support



# Introduction

- Kids want to be playful and happy regardless of having growing rods in their back!



- Patients and their families often ask to know about the limitations after GR surgery



# Purpose

- **Recommendations** on post operative care after GR surgery **are variable** among surgeons
- Our study goal is to find out about these **agreements** and **disagreements**



# Methods and Materials

- 21 pediatric spinal deformity surgeons
- A 9-question survey
- Five main topics after GR surgery:
  - 1- Type of activity
  - 2- Duration of physical activity limitation
  - 3- Bracing
  - 4- Pain management
  - 5- Bathing



# Type of Activity

- **Mild activities/sports** were allowed after index GR

Activity Level	After index GR surgery	After GR lengthening
1-Simple walking	95%	95%
2-Putting clothes on/off	95%	90%
3-Lifting small/light objects	95%	90%
4-Sedentary play	95%	86%
5-Carry light backpack (up to 3lbs)	86%	90%
6-Playing in pool (w/guardian)	76%	90%
7-Swimming	71%	86%
8-General play w/peers	67%	95%
9-biking (w/guardian)	62%	90%
10-Running	43%	81%



# Type of Activity

- Low- to moderate-impact sports were allowed after GR lengthenings

Activity Level	After index GR surgery	After GR lengthening
11-Biking (w/o guardian)	29%	81%
12-Low impact sports (basketball/soccer)	29%	71%
13-Carry backpack (up to 10 lbs)	33%	71%
14-Dancing	38%	71%
15-Bending	24%	67%
16-Twisting	29%	67%
17-Heavy lifting	24%	52%
18-Karate/martial arts	10%	33%
19-High impact sports (football, hockey)	5%	24%
20-Gymnastics	0%	24%



# Duration of Activity Limitation

- All (21/21) agreed on a more strict activity limitation after GR index vs. lengthenings.
- After index GR
  - 11/21 (52%): 3-month,
  - 6/11 (29%): 6-month,
  - 3/21 (14%): up to 1<sup>st</sup> lengthening
  - 1/21 (5%): 1-month
- After GR lengthening
  - 11/21 (52%): until the incision heals
  - 9/21 (43%): no restriction
  - 1/21 (5%): until the next lengthening





# Bracing

- 17/21 (81%) advocated TLSO bracing after index GR:
- 29% for 6 months
- 6% for 3-6 months
- 41% for 3 months
- 24% relied on radiographic assessment
- None advised bracing after dual GR lengthening. One advised bracing for single rod lengthening



# Pain Management

- After Index GR:
- 11/19 (58%): A combination of acetaminophen/opioids
- 5/19 (26%) advised opioids only
- 3/19 (16%) advised Acetaminophen only
- 11% (2/21) did not prescribe analgesics.
- Pain management practice following lengthening procedures was similar to index surgery.



# Bathing

- **Sponge** bath (3 days)
- **Shower** (4-5 days)
- **Tub bath** (2-3 weeks).



# Conclusion-Activity

- **Variation exists** among surgeons recommendation for post op care after GR surgery
- **More strict limitation** agreed upon following index GR while a **shorter and more flexible** restriction after lengthenings is recommended.
- **Mild activities/sports** were allowed after index GR, and **low- to moderate-impact sports** were allowed after GR lengthenings.
- **High-impact sports** and **twisting/bending** motions were not advised after any type of GR surgery.



# Conclusion-Bracing

- **Bracing** was generally advised after Index GR surgery for at least 3 months but it wasn't found **necessary** after GR lengthenings by majority of surgeons.



# Conclusion-Bathing

- **Sponge Bathing** can start immediately after GR surgery
- **Oral combined opioid/acetaminophen** is mostly advocated for post-operative analgesia.



# Thank you



- *The Growing Spine Foundation is supported primarily by donations from its surgeon members and also from unrestricted grants received either directly, through OREF, from industry and other individuals and organizations including Biomet, DePuy Spine, Ellipse Technologies, Globus Medical, K Spine, K2M, Medicro, Medtronic, Nuvasive, Orthopediatrics, Showa Ika, Signus Medizintechnik, Stryker Spine, Synthes, and the Scoliosis Association of San Diego.*
- *The Growing Spine Foundation acknowledges the support and thanks all donors who support its cause.*

