



# Growth Attenuation Therapy: Practice & Perspectives of Pediatric Endocrinologists

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## Background

Growth attenuation therapy (GAT) is administration of exogenous sex steroids before puberty to decrease final height by accelerating epiphysis closure. Treatment of a girl with severe cognitive and physical disabilities in 2006 prompted intense debate. There are no reliable data on GAT prescribing practices and attitudes of pediatric endocrinologists.

## Objectives

1. Determine diagnoses that prompt consideration of GAT
2. Assess how often pediatric endocrinologists prescribe GAT
3. Assess pediatric endocrinologists' attitudes about growth attenuation therapy (GAT) in children with severe physical & cognitive disability

## Design

Pediatric Endocrine Society (PES) members received questionnaires (n~1100). Consent was implied by participating. Anonymity was assured with de-identified data collection.

## Results

284 (26%) of ~1100 PES members (74% academic physicians) completed the survey.

**62%**  
OF RESPONDENTS  
**have been asked**  
TO PRESCRIBE GAT AND

**27%**  
OF RESPONDENTS  
**have prescribed**  
GROWTH ATTENUATION THERAPY

**GAT MEDICATIONS PRESCRIBED**

1. Oral estrogen (80%)
2. Transdermal estrogen (13%)
3. Androgens (27%)

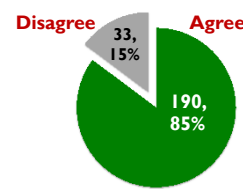
**HOW OFTEN RESPONDENTS PRESCRIBED GAT FOR A CHILD WITH SEVERE PHYSICAL & COGNITIVE DISABILITY**

# of times	# of respondents
1 time	15
2-5 times	13
6-10 times	4
<b>Totals # of prescriptions:</b>	<b>65-120</b>

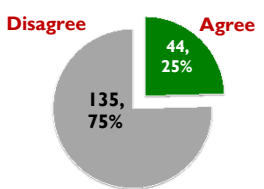
**At least 65 children**  
WITH SEVERE PHYSICAL + COGNITIVE DISABILITY  
**have been treated with GAT to reduce ultimate height**

### RESPONDENTS' ATTITUDES ABOUT GAT

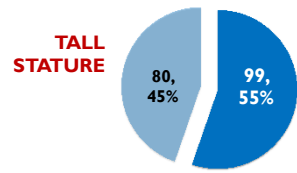
"Growth attenuation therapy is sometimes appropriate."



"GAT should be actively offered for cases of severe physical and cognitive disability, not just when raised by a parent."



### DIAGNOSES PROMPTING GAT INQUIRIES

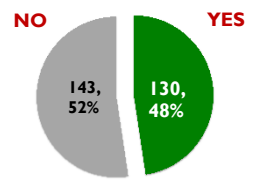


### REASONS RESPONDENTS DID NOT PRESCRIBE GAT IN CHILDREN WITH SEVERE PHYSICAL & COGNITIVE DISABILITY

1. Family decided against (63%)
2. Concern about side effects (43%)
3. Legal concerns (13%)
4. Personal conviction or beliefs (10%)
5. Ethics consultation recommendation (7%)

### PASSIVE GAT EXPERIENCE

Have you withheld treatment for precocious puberty in a child with severe physical and cognitive disability to reduce ultimate height?



## Conclusions

1. Growth attenuation therapy (GAT) has been prescribed by at least **32** respondents to reduce height in at least **65** children with severe and physical cognitive disability.
2. This therapy is no longer rare. At least **62%** (n=175) of respondents have had inquiries for GAT, and **27%** (n=74) have prescribed GAT.
3. Severe physical and cognitive disability has replaced tall stature as the main indication for GAT inquiries.
4. More data are needed to assess risks and benefits of GAT by evaluating side effects, linear height reduction and improvement in quality of life.

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