

Adolescent health brief

# Tall Women's Satisfaction with their Height: General Population Data Challenge Assumptions behind Medical Interventions to Stunt Girls' Growth

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## Abstract

One-third of American pediatric endocrinologists offer growth-suppression treatments for tall girls despite serious medical risks and little or no evidence of benefit to psychosocial functioning. A survey of 59,632 adults shows that most tall women are satisfied with their height, which raises questions about the continued use of growth-suppression treatments. © 2007 Society for Adolescent Medicine. All rights reserved.

## Keywords:

Body image; Women; Men; Tall; Stature; Height; Estrogen; Growth suppression

The use of estrogen to reduce tall stature in girls has declined considerably in the last 25 years. However, a recent survey found that one in three American pediatric endocrinologists continues to offer growth-suppression treatments [1]. These treatments are presumed to avert alleged socio-psychological consequences of tallness. Furthermore, such treatments persist despite serious long-term medical risks such as later-life fertility problems, as well as short-term problems, such as nausea and weight gain [1,2].

Recipients of growth-suppression treatments are predominantly female. Taller individuals are seen as more interpersonally dominant; therefore, tall women challenge traditional norms about women's social status relative to men's [3]. The decrease in growth-suppression treatments in recent years likely reflects greater societal acceptance of women's equality and of taller women in general, as evidenced by the admiration for female athletes and supermodels. Increased concern over health risks has almost certainly

played a role as well. Nevertheless, many doctors in the United States are currently willing to intervene for women projected to grow to 183 cm (6'0") [1,2], whereas some doctors use 203 cm (6'8") as their criterion for intervention for men [4].

Despite concerns over the well-being of tall women, little research has been conducted on the psychosocial benefits of hormone treatments. In the largest and most comprehensive study of adult women who were evaluated for treatment as adolescents, virtually all of the untreated women were glad they had not been treated (99.1%), whereas a significant portion of treated women wished they had not been treated (42%) [5]. Further, the vast majority of treated women (83%) and untreated women (92%) were satisfied with their height, and they were equally likely to be married or cohabiting [5]. Finally, no difference was detected in the psychological well-being of treated vs. untreated women [6].

The same study yields insight about why tall girls and adolescents receive these hormonal treatments. Only 17.5% of the 844 Australian women studied cited their own unhappiness or difficulties as the reason for seeking a medical assessment; in most cases, it was a parent and/or doctor who considered the projected mature height problematic [6].

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More information on tall women's feelings about their height is essential if pediatricians, endocrinologists, psychologists, and other medical and counseling professionals are to give well-informed recommendations to concerned parents of tall children. Rather than relying on reports from small-scale studies of former patients self-selected because of their concern about tall stature, we examined data from a large general population survey.

## Methods

Data reported here come from a 27-item online survey conducted in February of 2003 ( $n = 59,632$ ). Visitors volunteered to take a "Sex and Body Image Survey"; 98% were from the popular news website *MSNBC.com* and 2% were from *Elle.com*. Details regarding predictors of body satisfaction and the sample are reported elsewhere; here we present more detailed analyses regarding height satisfaction [7]. Secondary data analysis was approved by the UCLA Institutional Review Board.

The 30,347 women (mean age = 34.02,  $SD = 11.42$ ) and 29,285 men (mean age = 37.81,  $SD = 12.94$ ) who participated in the survey answered the question, "How do you feel about your height?" by choosing one of these response options: "I wish I were taller," "I wish I were shorter," and "I feel okay about my height." Although "feeling okay" may be a better measure of "contentment" than "satisfaction," we defer to the keyword "satisfaction" that is more common in medical literature.

Participants also reported demographic factors, including their height, using a pull-down chart. The average reported heights for men (5'10.76") and women (5'5.16") in our sample were 1 inch taller than national data on measured height (see <http://www.cdc.gov/nchs/fastats/bodymeas.htm>). Based on means and standard deviations for our sample, five height groups were created to facilitate data presentation while maintaining a relatively normal distribution. For women, these were: Very Short (< 5'1; 2%), Short (5'1–5'2; 16%), Average (5'3–5'6; 51%), Tall (5'7–5'10; 28%), and Very Tall (5'11–6'3; 3%). For men, these were: Very Short (< 5'5; 2%), Short (5'5–5'7; 11%), Average (5'8–5'11; 47%), Tall (6'0–6'3; 35%), and Very Tall (> 6'3; 5%).

## Results

As Table 1 shows, the women who felt most positively were those between 5'7" and 5'11." At least eight in 10 women expressed contentment with those heights. At 6' tall, the symbolic marker where some pediatric endocrinologists say they would intervene, over three-quarters (77%) of women were satisfied with their height. More than six in 10 women at heights 6'1" to 6'3" were content. In contrast, only 33% to 56% of women at or below the U.S. mean height of 5'4" were satisfied with their height. Virtually all of the dissatisfied women up to the height of 5'5" and a

Table 1  
Satisfaction with height as a function of self-reported height

Percent who responded "I feel okay about my height"									
Height	Women		Men		Height	Women		Men	
	%	n	%	n		%	n	%	n
< 5'1	33	644	19	27	6'0	77	221	82	4266
5'1	37	1849	32	34	6'1	63	65	89	2480
5'2	43	2894	29	62	6'2	61	33	93	2216
5'3	49	3175	29	113	6'3	65	20	94	1288
5'4	56	4545	21	256	6'4			92	742
5'5	65	3701	23	412	6'5			86	286
5'6	73	3942	25	1159	6'6			83	150
5'7	80	3434	26	1658	6'7			74	57
5'8	84	2407	30	2503	6'8			68	40
5'9	84	1475	39	2926	6'9			48	27
5'10	84	972	52	4244	6'10			43	28
5'11	80	475	67	3972	6'11+			76	25

Note: Height is given in feet and inches.

large majority of dissatisfied women from heights 5'6" to 5'8" wanted to be taller, whereas dissatisfied women at 5'9" were split roughly equally in their desires to be shorter or taller. By contrast, the majority of dissatisfied women from heights 5'10" to 6'3" wanted to be shorter.

Table 1 does not include data on the women 6'4" or taller due to cell sizes so small ( $n < 20$ ) that respondents' error or inaccurate responses could distort findings. It is with caution that we report that between 65% and 85% of the women in each of the height groups above 6'3" felt "okay" with their height. Turning to men, the majority of men who were 5'10" to 6'8" were satisfied with their height. However, more than half of men shorter than 5'10" were not satisfied. This was also true of men who were taller than 6'8" (with the exception of men who were 6'11").

We also investigated whether older tall women, who likely were subjected to more rigid gender stereotypes, would be less satisfied than younger tall women. Surprisingly, results for tall women were similar across age groups. The majority of Very Tall women were satisfied among those aged 18–34 years (75%;  $n = 526$ ), 34–49 years (81%;  $n = 229$ ), and over 50 (76%;  $n = 59$ ).

We note, too, that the percentage of women in a relationship (dating, cohabiting, or married) was similar across the height groups: Very Short (80%), Short (80%), Average (80%), Tall (80%), and Very Tall (76%). Among men, the percent in a relationship was also similar across height groups: Very Short (71%), Short (73%), Average (78%), Tall (71%), and Very Tall (77%).

## Discussion

### Satisfaction with height among tall women

Our data indicate that dissatisfaction with tall stature is not nearly as widespread as is commonly assumed. These

results should not be interpreted as an attempt to minimize the fact that many tall women do encounter negative social interactions as a result of their height. This may include teasing in the preteen and teenage years, as well as negative attention (e.g., stares) in adulthood. Furthermore, although contemporary data suggest that women of all heights generally still prefer a male partner taller than themselves, whereas men generally prefer dating a shorter partner [8], our data suggest that concerns regarding tall women's inability to secure a partner are generally unwarranted.

Furthermore, the presumed disadvantages of tall stature may be offset by advantages. For example, taller men and women generally have greater earning power [9], and tall stature may be becoming a prestigious trait in women as a result of the increasing number of tall athletes and models highly visible in the media. There is also some evidence suggesting that men willing to date women taller than themselves hold less rigid views of the male gender role [10]. Given the low prevalence of dissatisfaction among the tall women in our sample, our data do not support the continued use of hormonal treatment to reduce women's height in most cases for psychosocial reasons.

#### *Dissatisfaction with height among short individuals*

Although the focus of our investigation was on tall women's satisfaction with height, our results also have implications for short men and women. Rather than tall individuals reporting dissatisfaction with their height, it was primarily shorter-than-average men and women who were most dissatisfied. Some may view this as support for hormone-based interventions to promote height in shorter individuals. However, little is known about the long-term effects of such treatments. Like some of the other researchers cited in this brief [5,6], we suggest that psychological intervention and promotion of societal change are preferable to hormonal interventions with possible long-term medical consequences.

#### *Limitations and strengths*

Our findings are based entirely on self-reports of height and we relied on single-item measures of key variables. Our online sample was not nationally representative, but our large and diverse population allowed us to compare height satisfaction of women and men across the height and age spectrum. Respondents of online surveys can answer questions with the protection of anonymity.

#### *Conclusions*

On the whole, our findings suggest that most tall men and women are satisfied with their height. Adolescents, parents,

and pediatricians should take this essential information into account when considering growth-suppression treatments. More comprehensive research on the experience of individuals with tall stature is needed before life-changing hormonal interventions are implemented for nonmedical reasons.

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