

**HEALTHY  
HEIGHT**

FINALLY  
NUTRITIONAL SUPPORT  
FOR  
SHORT STATURE



*Nutrition shown in a clinical study to help kids grow*



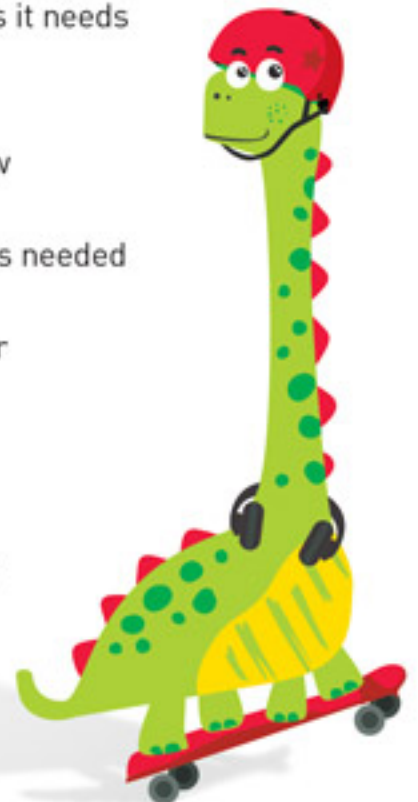
## HEALTHY HEIGHT — SAFE AND CLINICALLY-TESTED SUPPORT FOR SHORT STATURE CHILDREN

Developed by pediatric endocrinologists and nutritionists, Healthy Height is a nutritional shake containing key nutrients known to stimulate growth in children. Adding 2 servings of Healthy Height to a child's diet each day helps supply the body with the nutrients it needs for proper growth.

- Provides 12 g protein/serving to support growth
- Contains 350 mg of arginine per serving; children with stunted growth have low circulating levels of arginine<sup>12</sup>
- Supplemented with vitamins A, C, D and minerals calcium, iron, zinc--nutrients needed to support growth but commonly deficient in children's diets<sup>13</sup>
- Only 3g of added sugar (9g total/serving), consistent with recommendations for healthy diets<sup>14,15</sup>
- No artificial colors, flavors or preservatives
- Gluten Free and Soy Free

Healthy Height is great for children who are not candidates for growth hormone therapy or as an additional nutritional boost for children participating in growth hormone therapy.\*

\* Efficacy not tested on children who are treated with Growth Hormone.



# THE PROBLEM OF NUTRITIONAL GROWTH RETARDATION

Worldwide, nutritional growth retardation (NGR) is a primary cause of growth stunting and short stature.<sup>1</sup>

## NUTRITION DRIVES GROWTH AND HEALTH

Poor quality nutrition causes growth deceleration and short stature, usually without other symptoms of poor nutritional status.<sup>6,7</sup>

- American children 2 - 17 years of age have poor quality diets.<sup>2</sup>
- Celiac disease, gluten sensitivity, Attention-deficit hyperactivity disorder (ADHD) and food allergies and intolerances worsen diet quality, contributing to stunting and poor growth in children.<sup>3-5</sup>

Marginal nutritional status also causes other serious conditions:

- Generalized immune incompetence
- Increased infection risk (including pneumonia, diarrhea, meningitis, and sepsis)<sup>8</sup>
- Impaired behavioral development<sup>9</sup>
- Poor cognitive ability<sup>9</sup>
- Epigenetic changes increasing risk of adult onset chronic diseases (e.g. metabolic syndrome, cardiovascular disease)<sup>10</sup>

### AMERICAN CHILDREN 2-17 YEARS OF AGE HAVE POOR DIET QUALITY



Source: Health & Diet Quality: Average Diet Scores Using the Healthy Eating Index- 2010 (HEI2010) for Children by Age, 2011-2012.

## NUTRITION SHOWN IN A CLINICAL STUDY TO HELP KIDS GROW

In a prospective, randomized, double-blind, placebo-controlled trial (PRCT), 200 healthy, lean, short, prepubertal children, 3-9 years-old were provided an intervention with the nutritional profile in Healthy Height (n=100) or the placebo supplement (n=100) along with dinner for 6 months.

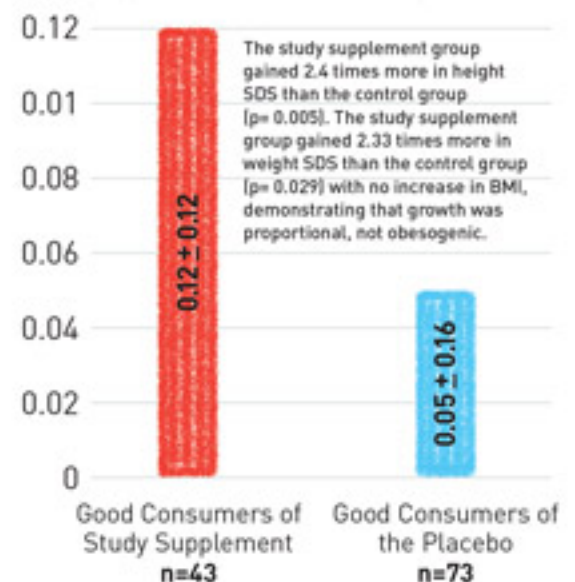
At 6 months, the children who consumed at least half of the recommended daily intake demonstrated significant increases in height (average 0.5-0.9 cm), compared to children consuming the control supplement. Further, the Healthy Height group showed positive correlations between the amount of Healthy Height consumed per body weight and gains in height and weight. No significant correlations were found in the control group.

During the next 6 months (6-12 months) children who consumed at least half the recommended daily intake of Healthy Height continued to increase their height. Children initially randomized to placebo were offered the nutritional profile in Healthy Height and experienced significant growth; repeating the findings of the double-blind phase.

Finally, although the Healthy Height group showed significant improvements in height and weight, there was no increase in body mass index; growth was proportional not obesogenic.

### CHANGE IN HEIGHT BETWEEN STUDY SUPPLEMENT AND CONTROL GROUPS AT 6 MONTHS

Change in Growth Rate (Height SDS)



# HEALTHY HEIGHT

## Nutrition to Help Kids Grow

- ✓ Excellent Source of Protein and Zinc
- ✓ Good Source of Vitamin C and Calcium
- ✓ No Artificial Flavors or Colors
- ✓ No Human Growth Hormone
- ✓ rBST-Free
- ✓ Gluten Free
- ✓ Soy Free
- ✓ No Preservatives
- ✓ No Corn Syrup
- ✓ Kids Love It



Learn more at  
[www.healthy-height.com](http://www.healthy-height.com)

Available for purchase at  
[Amazon.com](http://Amazon.com) and [Healthy-Height.com](http://Healthy-Height.com)

### PRODUCT COMPARISON

Designed for and clinically-tested in healthy, short, and lean children in a prospective, randomized, double-blind, placebo-controlled trial (PRCT)

Clinically shown to see height gain in 6 months of use

Supplemented with L-arginine

Protein per serving

Sugar per serving

Sodium per serving

	Healthy Height Shake Mix	PediaSure® Grow & Gain* Nutrition Powder	Boost® Kid Essentials™ 1.0 Drink**	Orgain® Kids Protein® Shakes***
Designed for and clinically-tested in healthy, short, and lean children in a prospective, randomized, double-blind, placebo-controlled trial (PRCT)	✓	✗	✗	✗
Clinically shown to see height gain in 6 months of use	✓	✗	✗	✗
Supplemented with L-arginine	✓	✗	✗	✗
Protein per serving	12g	6g	7g	8g
Sugar per serving	9g	12g	15g	13g
Sodium per serving	50mg	90mg	130mg	85mg

\* PediaSure® Grow & Gain is a registered trademark of Abbott Nutrition.

\*\* Boost® Kid Essentials™ 1.0 is a registered trademark of Nestle Health Science.

\*\*\* Orgain® Kids Protein® is a registered trademark of Orgain®

For the most current product information, see product label.

## MEET OUR SCIENTIFIC ADVISORY BOARD

*Our goal is to provide support for children who are struggling with growth. We're committed to conducting further research and will consult with our advisors to ensure Healthy Height is the best solution available.*

- **Dennis M. Bier, MD** - Professor of Pediatrics and Director of the Children's Nutrition Research Center at Baylor College of Medicine.
- **Mitchell E. Geffner, MD** - Chief of the Division of Endocrinology, Diabetes, and Metabolism at Children's Hospital Los Angeles (CHLA), Professor of Pediatrics at the Keck School of Medicine of USC, and the Ron Burkle Chair in the Center for Endocrinology, Diabetes, and Metabolism.
- **Douglas Idelson, MD** - Chief of Pediatrics at Yale Health Center, physician at Yale-New Haven Hospital, and Assistant Clinical Professor of Pediatrics at Yale School of Medicine.
- **Ron Newfield, MD** - Pediatric endocrinologist at Rady Children's Hospital-San Diego and professor of clinical pediatrics at UC San Diego School of Medicine.
- **Robert Rapaport, MD** - Professor of Pediatrics, Chief of the Division of Pediatric Endocrinology and Diabetes, and the Emma Elizabeth Sullivan Professor of Pediatric Endocrinology and Diabetes at Icahn School of Medicine at Mount Sinai, New York.
- **Virginia Stallings, MD** - Director of the Nutrition Center at The Children's Hospital of Philadelphia, and a Professor of Pediatrics at the University of Pennsylvania Perelman School of Medicine.

## THE IMPORTANCE OF DIETARY PROTEIN FOR GROWTH

Children's need for dietary protein is higher than adults'. In terms of body weight, pound for pound, children need more. Growth demands amino acids for building structural tissues, hormones, enzymes, and transport proteins. The amount of necessary dietary protein needed varies according to body weight and growth rate. For children one to three years old, protein can make up 5-20% of total calories, and for those 4 to 18 years old, 10-30% of total calories. Protein source and quality are important. High-quality proteins, such as milk proteins, are superior to plant-based protein for stimulating growth, even when protein and energy intakes are adequate.<sup>17-20</sup>



# ABOUT NUTRITIONAL GROWTH SOLUTIONS

Nutritional Growth Solutions is the product of a visionary health care system that believes it is the inherent right of every child to live a healthy life in a peaceful world. Every year pediatricians at Schneider Children's Medical Center in Israel have more than 20,000 visits from children with issues relating to height. For years, world-renowned scientists, doctors and researchers from the center have focused on child nutritional growth retardation, irrespective of race, religion or nationality.

In 2010, Schneider's experts took this wealth of practical and clinical information and developed a formula to help children of short stature grow better. The result is Healthy Height. While shown in a clinical study to promote growth, it is our hope that children who take this nutritional formula will also grow in confidence so they can each fulfill their unique potential.



## CHOCOLATE



### INGREDIENTS:

Whey Protein Concentrate, Maltodextrin, Nonfat Dry Milk, High Oleic Sunflower Oil, Organic Cane Sugar, Organic Cocoa Powder, Inulin (from Artichoke), Modified Food Starch, L-arginine, Natural Flavors, Monk Fruit Extract, Vitamin E (Tocopherols) Added to Preserve Freshness.

### VITAMINS & MINERALS:

Calcium Citrate, Zinc (Gluconate), Vitamin C (Ascorbic Acid), Iron (Ferrous Fumarate), Vitamin D3, Vitamin A (Palmitate).

Contains: Milk.

### NUTRITIONAL FACTS

About 14 servings per container

Serving size	2 Scoops (44g)	
Amount per serving	Dry Mix	with 1/2 cup 1% milk
	Calories	Calories
	180	235
	% DV*	% DV*
<b>Total Fat</b>	5g 6%	6g 8%
Saturated Fat	1g 5%	1.5g 8%
Trans Fat	0g	0g
Polunsaturated Fat	0g	0g
Monounsaturated Fat	3.5g	4g
<b>Cholesterol</b>	15mg 5%	25mg 8%
<b>Sodium</b>	50mg 2%	115mg 5%
<b>Total Carbohydrate</b>	22g 8%	29g 11%
Dietary Fiber	1.5g 5%	1.5g 5%
Total Sugars	9g	16g
Included Added Sugars	3g 6%	3g 6%
<b>Protein</b>	12g 21%	17g 34%
Vitamin D	1mcg 6%	2mcg 10%
Calcium	220mg 15%	374mg 30%
Iron	1mg 6%	1mg 6%
Potassium	92mg 2%	285mg 6%
Zinc	2mg 20%	3mg 25%
Vitamin C	10mg 10%	11mg 10%
Niacin	3mg 20%	3mg 20%

## VANILLA



### INGREDIENTS:

Whey Protein Concentrate, Maltodextrin, Nonfat Dry Milk, High Oleic Sunflower Oil, Organic Cane Sugar, Inulin (from Artichoke), Modified Food Starch, L-arginine, Natural Flavors, Vitamin E (Tocopherols) Added to Preserve Freshness.

### VITAMINS & MINERALS:

Calcium Citrate, Zinc (Gluconate), Vitamin C (Ascorbic Acid), Iron (Ferrous Fumarate), Vitamin D3, Vitamin A (Palmitate).

Contains: Milk.

### NUTRITIONAL FACTS

About 14 servings per container

Serving size	2 Scoops (43g)	
Amount per serving	Dry Mix	with 1/2 cup 1% milk
	Calories	Calories
	180	235
	% DV*	% DV*
<b>Total Fat</b>	5g 6%	6g 8%
Saturated Fat	1g 5%	1.5g 8%
Trans Fat	0g	0g
Polunsaturated Fat	0g	0g
Monounsaturated Fat	3.5g	4g
<b>Cholesterol</b>	15mg 5%	25mg 8%
<b>Sodium</b>	50mg 2%	115mg 5%
<b>Total Carbohydrate</b>	22g 8%	29g 11%
Dietary Fiber	1.5g 5%	1.5g 5%
Total Sugars	9g	16g
Included Added Sugars	3g 6%	3g 6%
<b>Protein</b>	12g 21%	17g 34%
Vitamin D	1mcg 6%	2mcg 10%
Calcium	220mg 15%	374mg 30%
Iron	1mg 6%	1mg 6%
Potassium	92mg 2%	285mg 6%
Zinc	2mg 20%	3mg 25%
Vitamin C	10mg 10%	11mg 10%
Niacin	3mg 20%	3mg 20%

## REFERENCES

- Bredenkamp C, et al. Persistent inequalities in child undernutrition: evidence from 80 countries, from 1990 to today. *Int J Epidemiol.* 2014;43(4):1328-1335. doi:10.1093/ije/dyu075.
- Health 6 Diet Quality: Average Diet Quality Scores Using the Healthy Eating Index-2010 (HEI-2010) for Children by Age. 2011-2012. <https://www.childstats.gov/americaschildren/tables/health6.asp>.
- Christie L, et al. Food allergies in children affect nutrient intake and growth. *J Am Diet Assoc.* 2002;102:1648-1651.
- Flammarion S, et al. Diet and nutritional status of children with food allergies. *Pediatr Allergy Immunol.* 2011 Mar;22(2):161-5. doi: 10.1111/j.1399-3038.2010.01028.x.
- Shepherd SJ, et al. Nutritional inadequacies of the gluten-free diet in both recently-diagnosed and long-term patients with coeliac disease. *J Hum Nutr Diet.* 2013; 26:349-358. doi: 10.1111/j.1399-3038.2010.01028.x.
- Lifshitz F. Nutrition and Growth. *J Clin Res Pediatr Endocrinol.* 2009;1(4):157-163. doi:10.4274/jcrpe.v1i4.39.
- Lifshitz F, et al. Nutritional dwarfing: a growth abnormality associated with reduced erythrocyte Na<sup>+</sup>,K<sup>+</sup>-ATPase activity. *Am J Clin Nutr.* 1991 Dec;54(6):997-1004.
- Olofin I, et al. Associations of suboptimal growth with all cause and cause-specific mortality in children under five years: a pooled analysis of ten prospective studies. *PLoS One.* 2013;8:e64636.
- Hoddinott J et al. The economic rationale for investing in stunting reduction. *Maternal & Child Nutrition.* 2014; 9 (Suppl. 2), 69-82.
- DeBoer MD, et al. Early childhood growth failure and the developmental origins of adult disease: Do enteric infections and malnutrition increase risk for the metabolic syndrome? *Nutrition reviews.* 2012;70(11):642-653. doi:10.1111/j.1753-4887.2012.00543.x.
- Semba RD, et al. Child Stunting is Associated with Low Circulating Essential Amino Acids *EBioMedicine.* 2016;6: 246-252. <https://doi.org/10.1016/j.ebiom.2016.02.030>
- Bird JK, et al. Risk of deficiency in multiple concurrent micronutrients in children and adults in the United States. *Nutrients.* 2017;9(7):655. doi:10.3390/nu9070655
- Guideline: Sugars intake for adults and children. Geneva: World Health Organization; 2015
- 2015 US Dietary Guidelines. <https://health.gov/dietaryguidelines/2015/guidelines/>
- Lebenthal Y, et al. Effect of a nutritional supplement on growth in short and lean prepubertal children: a prospective, randomized, double-blind, placebo-controlled study. *J Pediatr.* 2014;165(6):1190-1193.e1. doi: 10.1016/j.jpeds.2014.08.011.
- de Beer H: Dairy products and physical stature: a systematic review and meta-analysis of controlled trials. *Econ Hum Biol.* 2012;10: 299-309.
- Grasgruber P, et al. : Major correlates of male height: a study of 105 countries. *Econ Hum Biol.* 2016;21: 172-195.
- Berkey CS, et al.: Dairy consumption and female height growth: prospective cohort study. 2009;18:1881-1887.
- Hoppe C, et al. : Cow's milk and linear growth in industrialized and developing countries. *Annu Rev Nutr.*2006;26: 131-173.

## NUTRITIONAL GROWTH SOLUTIONS

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[WWW.HEALTHY-HEIGHT.COM](http://WWW.HEALTHY-HEIGHT.COM)

\* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.