

HUMAN GROWTH FOUNDATION

fourth friday



From the President's Desk

WINTER 2003

At this time of year the most important components of our lives are family and friends. For the Human Growth Foundation, it is a time to encourage new and renewed memberships. Remember our administrative staff is small and volunteers do much of our work. The fees received from our membership help us reach out to additional people in need of information regarding growth issues and growth hormone. Several of our members have taken advantage of "matching funds" (employers match your membership dues and donations to HGF).

We are anticipating 2003 to be an extremely active year with the list-serves as active as ever, HGF being aired on PBS and new research grants awarded.

Our Adult, Pediatric and Teen List-serves and Chat Room attendance continue to expand with Earl's help. These services provide invaluable information as well as support for our membership.

The Human Growth Foundation Annual Conference is scheduled to take place in Kansas City, Missouri March 28th and 29th. Campbell Howard has invested countless hours planning a conference that should be both informative and entertaining. CEU and CMU Credits will be available

for Medical and Healthcare Professionals. For those in attendance, I am certain that this will be a worthwhile experience.

The video project for which HGF was selected to participate in is now in the process of being edited. An advance copy should arrive at National Headquarters the early part of this year, and will be aired on PBS shortly thereafter.

HGF is proud to announce that we awarded six Full Grants for 2002, and will start our Small Grants Program for 2003 shortly. You can stay informed on all upcoming events by visiting us at the HGF website: www.hgfound.org.

The Annual Conference educational programs planned for attendees will be as follows:

MARCH 28, 2003 (Friday)

5:00-5:30 PM—Registration
5:30-6:15 PM
"Brain Functioning and Learning"
 Warren Rosen, Ph.D.
6:15-7:00 PM—Panel
"Living With Short Stature"
 Moderated by Warren Rosen, Ph.D. & Susan Mortweet, Ph.D.
 Panelists will be adults and chil-

dren previously or currently on GH therapy.

7:00-7:30 PM—Reception

MARCH 29, 2003 (Saturday)

8:00-8:30 AM—Registration
8:30-8:45 AM—Welcome
 Stephen Kemp, MD, Ph.D. and Campbell Howard, MD
8:45-9:45 AM Jack Fuqua, MD
"Puberty and It's Effect on Growth"
9:45-10:45 AM Warren Rosen, Ph.D. *"Joint Neurological Effects on Growth and Learning: The Example of Turner Syndrome"*
10:45-11:00 AM—Break
11:00-12:00 AM—Sandra Blethen, MD, Ph.D. *"Future Uses of Growth Hormone"*
12:00-1:00 PM—Lunch and Awards Presentations
1:00-2:00 PM—Raymond Hintz, MD *"Is Growth Hormone Therapy Safe?"*
2:00-3:00 PM—Wayne Moore, MD, Ph.D. *"Why Can't I Stop Growth Hormone? Transitioning to Adult Growth Hormone Therapy"*
3:00-4:00 PM—Frank Diamond, MD *"Laron Syndrome in Ecuador: An Odyssey From Genes to History"*
4:00-4:15 PM—Closing remarks and evaluations

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What does small for gestational age (SGA) mean? My pediatrician says that our 3 year old daughter was SGA, and she is still very small for her age. Is there any treatment that might improve her growth?

SGA refers to a baby whose weight or length at birth falls below the lowest expected normal range for the time the baby spent in the womb, called the gestational age. Fortunately, most children born SGA begin to catch up right away, grow quickly in the first 6 months of life, and reach the normal range on the growth chart by 2 years of age. However, SGA babies who remain "below" the growth chart at this age (about 10%) often fail to catch up, and reach small adult heights. While some SGA babies may also be growth hormone deficient, most are not. Rather, the process of intrauterine growth retardation appears to have permanently "down-regulated" the growth axis in these slow growing children.

Many recent studies have evaluated the usefulness of growth hormone therapy for short, non-growth hormone deficient SGA born children who had not caught up in their growth patterns after 2 years of age. deZegher and colleagues demonstrated a doubling of growth rate and weight gain, and a significant mean height gain in prepubertal growth hormone treated SGA children who received therapy for 2 years (1). Boguszewski showed that the best responders to growth hormone treat-

ment were younger children who were shorter than expected relative to their parental heights, and who received larger doses of growth hormone (2). Several investigators also demonstrated that the growth hormone dose prescribed for classically growth hormone deficient children (0.18-0.3 mg/kg/wk) is less effective for treatment of SGA short stature than a higher "pharmacologic" dose of 0.48 mg/kg/wk. In a Dutch study, almost every SGA child treated with this higher dose grew into the normal range on the growth charts within 5 years (3)! Reassuringly, growth hormone treatment of this population does not appear to adversely effect body proportions (4).

While the short term positive effects of growth hormone treatment in SGA children appear convincing over several years, the beneficial effect of this treatment on increasing a child's adult stature is less well defined. A small study of SGA children treated from a median age of 12.7 years to adult height showed a gain of one height standard deviation over target (predicted) height in these subjects (5). Larger, prospective, and carefully controlled studies of SGA children who are followed to their adult heights are needed to learn if this treatment provides the long term benefit of increased adult height as well as the short term benefit of increased growth rate.

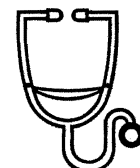
Side effects, while rare, have been reported in SGA children treated with growth hormone

including mild temporary increases in blood sugar levels, increased brain pressure, early puberty, rapid growth of the jaw, and increased curvature of the spine (scoliosis) (6). Growth hormone is known to interfere with the action of insulin. SGA babies may already have high insulin levels because of development of insulin resistance at the liver and muscles which occurs in the womb in order to divert more nutrient (sugar) from these organs to the brain for survival of a poorly growing baby. Treatment of SGA children with growth hormone raises fasting and glucose stimulated insulin levels (6). The long term risks of higher insulin levels in the growth hormone treated SGA children remain unknown. While much research remains, growth hormone appears to offer considerable promise for small SGA children who have not caught up in their growth by age 2, and the Food & Drug Administration (FDA) has approved its use in this group of children.

Frank B. Diamond, Jr., MD

References:

1. deZegher F, Maes M, Gargosky SE et al. J Clin Endocrinol Metab. 1996;81:1887-1892.
2. Boguszewski, M, Albertsson-Wikland K, Aronsson S et al. Acta Paediatr. 1998;87:257-263.
3. Sas T, de Waaal Wouter, Mulder P et al. J Clin Endocrinol Metab. 1999;84:3064-3070.
4. Sas TCJ, Gerver WJM, deBruin R et al. Clin Endocrinol 2000;53:675-681.
5. Ranke MB, Lindberg A, Acta Paediatr Suppl. 1996;417:18-26.
6. Chernaused SD, Czernichow P. 2002 SCIENS Worldwide Medical Education, published by Pharmacia.



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**DON'T FORGET!
HGF COUNTS ON YOUR SUPPORT!**



2003 MEMBERSHIP APPLICATION

Last Name (s) _____ First Name (s) _____

Primary Occupations _____

Home Address _____

City/State/Zip (Country/Postal Code) _____

Bus. Phone (____) _____ Home Phone (____) _____

E-Mail address _____ Focus Group _____

Type of Membership/Amount Enclosed: New Renew (all contributions are tax deductible)

Method of Payment: Check Money Order (membership dues must be paid in US currency)

The membership year runs from January 1 through December 31. Anyone who joins for the first time after September 1, will have membership through the following year.

Individual/Family (\$35) Supporting (\$50) Donor (\$100) Institutional (\$200)

Century Club (\$1000 individuals/\$1500 Corporate)

If this is a gift membership, name and address of donor _____

Chapter Affiliation (if Known) _____
(Call 1-800-451-6434 to find out if there is a chapter near you.)

Designation Of Dues:

How did you learn of HGF?

50% to local chapters 100% National Office of HGF

Type of growth disorder which interests you _____

Doctor's name/address/hospital _____

(Optional) Child's Name _____ DOB _____

Diagnosis _____ Secondary Condition (s) _____

Please contact me. I would like to assist in any way I can to benefit HGF

Please Mail Your Membership to:
Human Growth Foundation
997 Glen Cove Avenue
Glen Head, New York 11545



JOHN HICKEY FUND

Your tax deductible donations have begun the establishment of endocrine fellowships. However, the fund is an ongoing project. We ask you to keep the JHF in mind when deciding what charitable contribution you are going to make during 2003, and in the future.

SAVE THE DATE
ANNUAL CONFERENCE
MARCH 28TH & 29TH, 2003
KANSAS CITY, MISSOURI



This Newsletter is for information purposes only. The contents do not necessarily reflect the views of the Human Growth Foundation.

--ADDRESS SERVICE REQUESTED--

Human Growth Foundation
997 Glen Cove Avenue
Glen Head, New York 11545
1-800-451-6434

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