**What Does “SGA” Mean?**

SGA (small-for-gestational-age) generally describes any infant whose birth weight and/or length was less than the 3rd percentile (adjusted for prematurity). “IUGR” is a term also commonly used, and describes the small infant who had poor fetal length growth demonstrated while in-utero by ultrasound. “SGA” is currently used to describe any child born smaller than average in both length and weight. In this brochure, we will be focusing on the SGA child whose length and possibly weight has not caught up to what is appropriate for their age, and for whom doctors cannot determine any reason for the child’s smallness.

**How is SGA Diagnosed?**

Pediatricians usually begin by looking at all the possible factors for a child being born too small - maternal, environmental, and others. A pediatrician may send an SGA child to a geneticist, to see if the child’s features fit any number of short stature syndromes (some determined with lab tests, others by examination). An endocrinologist may run other tests, again ruling out all possible endocrine and metabolic reasons behind the child’s poor growth. Recall that between 3% and 10% of live births are small-for-gestational-age — we are focusing on the small subset of these births where the children’s growth stays on their lower growth curves and does not “catch-up” to any higher percentile. Sometimes an unknowing doctor may say “well, your child is OK because he is still following his own growth curve.” Never mind that the boy’s growth curve is below the 3rd percentile!

**What are Typical SGA Characteristics?**

Clearly, the typical SGA child is shorter and thinner than his or her peers. But the range of other characteristics can vary. A list of common characteristics and more information on SGA is listed below:

- low birth weight; probably low birth length
- inadequate catch-up growth in first 2 years
- persistently low weight-for-height proportion
- lack of muscle mass and/or poor muscle tone

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Other Common Characteristics of Short SGA Children:

- lack of interest in eating
- fasting hypoglycemia & mild metabolic acidosis
- generalized intestinal movement abnormalities:
  - esophageal reflux (may be silent with no spitting up)
  - delayed stomach emptying
- constipation
- blue sclera (bluish tinge in white of eye)
- late closure of the anterior fontanel (soft spot on the skull)
- frequent ear infections or chronic fluid in ears
- congenital absence of the second premolars
- delay of gross and fine motor development
- delay of speech and oral motor development
- delayed bone age early, later fast advancement
- early pubic hair and underarm odor (adrenarche)
- generalized intestinal movement abnormalities:
  - slow gastric emptying
  - reflux
- classical or neurosecretory growth hormone deficiency
- possible attention deficit disorder (ADD) or specific learning difficulties
- possible kidney abnormalities

How Can I Help my SGA Child Grow?

- Simplistically, there are two aspects of the SGA child’s growth: weight and height. Particular attention should be paid to weight gain during the first 2 years of life, as many children born SGA may struggle to gain weight (although, in a small fraction of cases, children born SGA may gain excessive weight during childhood). As previously discussed, a pediatric GI doctor can help diagnose and treat, or rule out, any medical issues that may impede an SGA child’s ability to gain weight. Reflux (often silent) and delayed gastric emptying appear to be the most common of these GI problems. Fast feeding and frequent feeding in the recovery room until the child can eat again.

When Can I Expect Regarding My Child’s Cognitive Abilities?

- An infant with SGA is generally born with normal intelligence. Learning disabilities and ADD may be increased in incidence in SGA. Autism and similar disorders like pervasive developmental disorder (PDD) may also be increased. It is unclear whether these issues just appear to be increased in SGA, are innate to SGA, or are related to SGA through early malnutrition and hypoglycemia, both of which are preventable.

Does a Delayed Bone Age Mean My Child Will Have Catch-Up Growth Later?

- Although most if not all SGA children have a bone age that is relatively delayed compared to their chronological age, studies show delays in bone age do not affect adult height in SGA children. One possible reason is that many SGA children experience a rapid acceleration of their bone age post birth, which may outstrip their growth hormone therapy. Within a span of just 12-18 months, an SGA child’s previously delayed bone age can quickly surpass its chronological age, negating any “extra growing time” that usually is present with delayed bone age.

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Are There Any Other Health Issues Associated with Being Born SGA?

- Multiple studies, short-term and longitudinal, have found an increased risk of health problems such as insulin resistance, cardiovascular disease, hypertension, obesity, and type 2 diabetes among adults who were born SGA or with low-birth weight. Explanations for these risks vary from intrauterine nutrition to genetic causes. Reflux problems and food allergies have been found to vary among SGA children. Day-to-day challenges such as feeding, growth hormone therapy requires a commitment.

Coping

- Coping with the time-consuming special attention and services necessary to care for an SGA child can be overwhelming, especially if you try to face it alone. Good physicians may have no experience with routine needs of SGA children. Day-to-day problems such as feeding formulas, clothes issues and peer pressures can be stressful if you are in contact with other families who “have been there.” Making connections with families dealing with similar issues and facilitating sharing of information and experience is a major goal of the MAGIC Foundation’s RSS/SGA Division. We can put you in touch with other people who have had, and have solved, problems similar to yours.

- The treatment of SGA children’s problems should be approached in a systematic and timely fashion. The major problems of SGA children are different in various age periods are all different, but most all these problems can be solved or dealt with successfully if you recognize the problem and use the tools available to you. The Board of Directors has the ability to move into various age periods and beyond the scope of this brochure to go into specifics on various treatment protocols. Feel free to contact MAGIC for more in-depth information.

- Most importantly, be your child’s #1 advocate, trust your parental gut instinct, and love your beautiful SGA child. We at MAGIC will be here to help you in whatever way you need.