asymptomatic with their CD will benefit from a gluten-free diet, and whether or not there is any effect of a gluten-free diet on the management of their diabetes. Amin and co-workers have demonstrated that indeed children with CD and type 1 diabetes are anthropometrically different from those children without CD, and that treatment reverses this finding. In addition, there appears to be a treatment benefit on overall glucose control. The authors noted that their data could have been influenced by the frequent visits to the dietician by case subjects. It will be important to determine whether gluten-free diet is of benefit in all children with diabetes, and or whether similar nutritional input to all type 1 diabetic children could improve HbA_{1c} to the extent observed in this study.

William L. Clarke, MD

Risk for Abnormal Outcomes is Increased with Assisted Reproductive Technology

The advent of assisted reproductive technologies (ART) has increased the complexity of care in newborn nurseries. An increased number of premature infants and multiple births are among a variety of risks that occur with the increased frequency of ART. These risks should be shared with all perspective parents (patients).

An article by Schieve et al studied 42,463 infants who were born between 1996 and 1997, and who had been conceived utilizing ART. These infants were compared to the three million plus infants born in the United States during that period. Among singleton births conceived by ART, and born at 37 weeks or after, the risk for low birth weight was 2.6 times that in the general population. The use of ART was also associated with an increased rate of multiple births which also increases the rate of IUGR births and many other complications.

Hansen et al reported on 301 infants conceived by intracytoplasmic sperm injection and 837 infants conceived with in vitro fertilization (IVF). These were compared to naturally conceived infants from the same region. The infants conceived with ART had an increase of birth defects which was greater than double the occurrence among the naturally conceived. The abnormalities involved a broad spectrum of congenital anomalies. The etiology for the increased risk was unclear. However, advanced maternal age, the usual underlying causes of infertility, medications used to induce ovulation and maintain pregnancy, factors associated with procedures such as freezing and thawing of embryos, and delayed fertilization of the oocyte individually or collectively, contributed to this increased risk.

Strömberg et al studied the neurologic sequelae of children born after IVF. Through a population based retrospective cohort assessment, they compared the neurologic outcome of 5,680 children born after IVF against the neurological outcome of 11,360 matched controls. For each of the 2,060 twins born after IVF, a second set of twin controls was used. Children born after IVF demonstrated an odds ratio of 1.7 of needing habilitation services. Among singletons born after IVF, the risk was 1.4. The most common neurologic disorder was cerebral palsy, with a relative risk of 3.7 for all children born after IVF and 2.8 for singletons. Data concerning twins born after IVF was essentially the same as control twins in respect to neurologic sequelae. Twins with low birth rate and prematurity were more likely to require habilitation services. Maternal age did not seem to be a factor in this study.

Multiple births have an increased risk factor for neurologic sequelae and, consequently, Ozturk et al. strongly recommend that no more than two embryos be placed in the uterus while performing IVF.

Hansen, et al. *N Engl J Med* 2002;346:725-730.
Ozturk, et al. *Lancet* 2002;359:232.
Schieve, et al. *N Engl J Med* 2002;346:731-737.
Strömberg, et al. *Lancet* 2002;359:461-465.

First Editor's Comment: *Information regarding the increased risk of problems associated with ART must be shared with the families who are considering using them. Healthcare providers must also be aware of these risks. The increased expenditures associated with ART are not just the cost of the procedure, but also involve the long-term health care costs. Healthcare costs have become more expensive because of these complications, and these are not usually considered when assessing the expenditures of ART.*

Judith G. Hall, OC, MD

Second Editor's Comment: *A dictum of physics is only rarely violated. Specifically every positive force has a negative force and vice versa. Chances are what we take daily. There are no positive assurances about anything except death. Therefore, we should expect that every technology will not be perfect – either in construction of the technology itself, or carrying out of a procedure with the technology and in the results thereof. Thus, we should not be disturbed by some imperfections of the system, although we should continue to try to make it perfect.*

Human error as well as errors of nature also complicate life, including life related to IVF. The Associated Press on July 10th released in newspapers around the world a report entitled "Test Tube Baby Mix-Up Causes Alarm: Birth of Black Babies to White Couple Raises Questions About Reliability of the Program". This occurrence was in England. Such occurrences of error undoubtedly are very rare, but inevitably occur.

Life goes on, but not always without error. The positivities of what IVF has, does, and will accomplish, far outweigh the negativity of the errors of nature and man.

Robert M. Blizzard, MD

Hypovitaminosis D Prevalence and Determinants Among African American and White Women of Reproductive Age: Third National Health and Nutrition Examination Survey, 1988-1994

This study addressed the issue of the prevalence and the determinants of hypovitaminosis D among 1,546 African American and 1,426 white women of reproductive age (15-49). These women were not pregnant and participated in the Third National Health and Nutrition Examination Survey (1988 – 1994). Hypovitaminosis D was defined as serum 25-hydroxyvitamin D concentrations of < 37.5 nmol/L. The prevalence of hypovitaminosis D was 42.4% among African American women as compared to only 4.2% among white women. The presence of hypovitaminosis D was independently associated with low consumption of milk or cereal, less than ideal use of vitamin D supplements, cold seasons, urban residence, low body mass index, and use of oral contraceptives. Even among the 243 African Americans who consumed an adequate intake of vitamin D from supplements (>200 IU/d), 28.2% had hypovitaminosis D. The authors concluded that the high prevalence of hypovitaminosis D among African American women warrants further examination of the vitamin D recommendations for these women. The determinants of hypovitaminosis D among women should be considered when these women are advised regarding dietary intake and supplement use.

Nesby-O'Dell S, et al. *Am J Clin Nutr 2002;76:187-192.*

Editor's Comments: *The report by this group of investigators provided compelling data with irrefutable evidence that vitamin D deficiency constitutes a major unrecognized epidemic in many young black adult women and in 5% of white women of childbearing age. This survey might have shown a much higher prevalence of hypovitaminosis D if it had been performed in the winter. We may also assume that vitamin D deficiency might be equally prevalent among males of the same age and race, although this was not studied. This article clearly documents it is still currently possible to frequently find vitamin D deficiency in the United States, which plagued our ancestors during the 19th century. There are vulnerable populations, such as those who are not exposed to the benefits of sunlight irradiation, and in those who are dark skinned. The latter may not be able to synthesize sufficient vitamin D from the skin to prevent vitamin D deficiency, and may be in need of higher levels of vitamin D intake as compared to their white counterparts. Therefore, the recommendation to examine the dietary recommendations for young black women and men should be quickly undertaken. Since the black population has a high incidence of lactase deficiency and, therefore, not able to tolerate milk, oral vitamin D supplements may be needed.*

In this study there were no measurements of parathyroid hormone levels or the active metabolic vitamin D (25-D hydroxy vitamin D), both of which are very sensitive indicators of calcium homeostasis and vitamin D deficiency. The high prevalence of hypovitaminosis D among "healthy young female adults" is important as vitamin D deficiency is associated with osteomalacia, bone pain, muscle aches, muscle weakness, and fibromyalgia. It also causes secondary hyperparathyroidism, which can precipitate and exacerbate osteoporosis by increasing mobilization of mineral and matrix from the skeleton. Therefore, there is reason for each of us to pay attention to an easily remedied medical problem that affects many of our patients whether they are adults or children.

Fima Lifshitz, MD

β-Cell Expression of IGF-I Leads to Recovery from Type 1 Diabetes

A method by which to reverse the process that leads to destruction of pancreatic islet cells and type 1 diabetes mellitus is the "Holy Grail" that all diabetologists seek. In the present report from Barcelona, the investigators of the School of Veterinary Medicine and Gene Therapy Center succeeded in doing just that in an animal model