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<http://health.enotes.com/childrens-health-encyclopedia>

Intersex States

Definition

Intersex states are conditions where a newborn's sex organs (genitals) look unusual, making it impossible to identify the gender of the baby from its outward appearance.

Description

All developing babies start out with external sex organs that look female. If the baby is male, the internal sex organs mature and begin to produce the male hormone testosterone. If the hormones reach the tissues correctly, the external genitals that looked female change into the scrotum and penis. Sometimes, the genetic sex (as indicated by chromosomes) may not match the appearance of the external sex organs.

Persons with intersex states can be classified as a true hermaphrodite, a female pseudohermaphrodite, or a male pseudohermaphrodite. This is determined by examining the internal and external structures of the child.

True hermaphrodites are born with both ovaries and testicles. They also have mixed male and female external genitals. This condition is extremely rare.

A female pseudohermaphrodite is a genetic female. However, the external sex organs have been masculinized and look like a penis. This may occur if the mother takes the hormone progesterone to prevent a miscarriage, but more often it is caused by an overproduction of certain hormones.

A male pseudohermaphrodite is a genetic male. However, the external sex organs fail to develop normally. Intersex males may have testes and a female-like vulva, or a very small penis.

Demographics

About one in every 2,000 births results in a baby whose sex organs look unusual. True hermaphrodites are extremely rare.

Any abnormality in chromosomes or sex hormones, or in the unborn baby's response to the hormones, can lead to an intersex state in a newborn. Intersex states may also be caused by a condition called [congenital adrenal hyperplasia](#), which occurs in about one out of every 5,000 newborns. This disease blocks the baby's metabolism and can cause a range of symptoms, including abnormal genitals.

Common problems

When doctors are uncertain about a newborn's sex, a specialist in infant hormonal problems is consulted as soon as possible. Ultrasound can locate a uterus behind the bladder and can determine if there is a cervix or uterine canal. Blood tests can check the levels of sex hormones in the baby's blood, and chromosome analysis (called karyotyping) can determine sex. Explorative surgery or a biopsy of reproductive tissue may be necessary. Only after thorough testing can a correct diagnosis and determination of gender be made.

Parental concerns

Treatment of intersex states is controversial. Traditional treatment assigns sex according to test results. Most doctors believe this gives the child the potential to identify with a sex. Treatment may then include reconstructive surgery followed by hormone therapy. Babies born with congenital adrenal hyperplasia can be treated with cortisone-type drugs and sometimes surgery.

Counseling should be given to the entire [family](#) of an intersex newborn. Families should explore all available medical and surgical options. Counseling should also be provided to the child when he or she is old enough.

Since the mid-1950s, doctors have typically assigned a sex to an intersex infant based on how easy reconstructive surgery would be. The American Academy of Pediatrics states that children with these types of genitals can be raised successfully as members of either sex, and recommends surgery within the first 15 months of life.

Some people are critical of this approach, including intersex adults who were operated on as children. The remolded genitals do not function sexually and can be the source of lifelong [pain](#). They suggest that surgery be delayed until the individual can make informed choices about surgery and intervention.

KEY TERMS

[Chromosome](#)—A microscopic thread-like structure found within each cell of the human body and consisting of a complex of proteins and DNA. Humans have 46 chromosomes arranged into 23 pairs. Chromosomes contain the genetic information necessary to direct the development and functioning of all cells and systems in the body. They pass on hereditary traits from parents to child (like eye color) and determine whether the child will be male or female.

Resources

BOOKS

Dreger, Alice D. *Intersex in the Age of Ethics*. Hagerstown, MD: University Publishing Group, 1999.

New, Maria I. and Nathalie Josso. "Disorders of Sexual Differentiation." In *Cecil Textbook of Medicine*. 22nd ed. Ed. by Lee Goldman, et al. Philadelphia: Saunders, 2003, 1463–71.

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Preves, Sharon E. and Susan E. Preves. *Intersex and Identity: The Contested Self*. South Brunswick, NJ: Rutgers University Press, 2003.

Wilson, Jean D. and James E. Griffin. "Disorders of Sexual Differentiation." In *Nelson Textbook of Pediatrics. Harrison's Principles of Internal Medicine. 15th ed.* Ed. by Eugene Braunwald et al., New York, McGraw Hill, 2001, 2172–83.

PERIODICALS

Akhtar, J. "Assigning gender to babies with intersex anomalies." *Journal of the College of Physicians and Surgeons in Pakistan* 14, no. 3 (2004): 127–8.

Biswas, K., et al. "Imaging in intersex disorders." *Journal of Pediatric Endocrinology and Metabolism* 17, no. 6 (2004): 841–5.

Lee, P. A. and Money, J. "Communicating with parents of the newborn with intersex: transcript of an interview." *Journal of Pediatric Endocrinology and Metabolism* 17, no. 7 (2004): 925–30.

Ronfani, L. and Bianchi, M.E. "Molecular mechanisms in male determination and germ cell differentiation." *Cellular and Molecular Life Sciences* 61, no. 15 (2004): 1907–25.

ORGANIZATIONS

American Academy of Family Physicians. 11400 Tomahawk Creek Parkway, Leawood, KS 66211–2672. (913) 906–6000. E–mail: fp@aafp.org. Web site: <http://www.aafp.org/>.

American Academy of Pediatrics. 141 Northwest Point Boulevard, Elk Grove Village, IL 60007–1098. (847) 434–4000, Fax: (847) 434–8000. E–mail: kidsdoc@aap.org. Web site: <http://www.aap.org/default.htm>.

American Board of Obstetrics and Gynecology. 2915 Vine Street Suite 300, Dallas TX. 75204. (214) 871–1619. Fax: (214) 871–1943. E–mail: info@abog.org. Web site: <http://www.abog.org>.

American College of Obstetricians and Gynecologists. 409 12th St., S.W., PO Box 96920, Washington, D.C. 20090–6920. Web site: <http://www.acog.org>.

WEB SITES

"Advocacy." *Intersex Society of North America*. Available online at: <http://www.isna.org/drupal/index.php>.

"Ambiguous Genitalia Support Network." *Genetic Alliance*. Available online at: <http://www.geneticalliance.org/diseaseinfo/displayorganization.asp?orgname=Ambiguous+Genitalia+Support+Network>

"Sexuality and Sexual Differentiation Syndromes." *University of Kansas College of Medicine*. Available online at: <http://www.kumc.edu/gec/support/ambig.html>.

"Support." *Intersex Support Group International*. Available online at: <http://www.xyxo.org/isgi/index.html>.

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