

Gender Determined in Womb

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BALTIMORE (AP) - A study of male children who were born without penises and raised as girls found that most of them considered themselves boys when they got older - suggesting that gender identity is determined in the womb.

The results call into question the practice of surgically "reassigning" the sex of such infants, researchers at the Johns Hopkins Hospital said Friday.

Researchers tracked the development of 27 children who had been born without a penis, a rare defect known as a cloacal exstrophy. The infants were otherwise male with normal testicles, male genes and hormones.

Twenty-five of the children were sex-reassigned - doctors castrated them at birth and their parents raised them as girls.

But over the years, all of the children, now ages 5 to 16, exhibited the rough-and-tumble play of boys. Fourteen declared themselves to be boys, in one case as early as age 5, said Dr. William G. Reiner, a child and adolescent psychiatrist and urologist at the Hopkins Children's Center.

"These studies indicate that with time and age, children may well know what their gender is, regardless of any and all information and child-rearing to the contrary," he said. "They seem to be quite capable of telling us who they are."

The two children who were not reassigned and were raised as boys fit in well with their normal male peers and were better adjusted psychologically than the reassigned children, Reiner said.

The findings were presented Friday at the Lawson Wilkins Pediatric Endocrine Society Meeting in Boston.

"This has very profound implications for the development of gender identity," said Michael Bailey, an associate professor of psychology at Northwestern University, who studies gender identity and sexual orientation. "This suggests that hormones' effect on the brain has a major impact on gender identity."

Reiner also called for a thorough review of the practice of sex reassignment of children.

Dr. Marianne J. Legato, a professor of clinical medicine who studies the differences between men and women at Columbia University, said that sexual differentiation occurs in the first trimester of pregnancy.

"When the brain has been masculinized by exposure to testosterone, it is kind of useless to say to this individual, 'You're a girl,'" she said. "It is this impact of testosterone that gives males the feelings that they are men."

The results contradicted a Canadian study published in the journal *Pediatrics* in 1998 that suggested gender identity develops after birth. In that study, researchers found that a boy who was raised as a girl after his penis was mutilated during circumcision continued to live as a woman.