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## JOURNAL ARTICLE

# Ontogeny of 3 beta-hydroxysteroid dehydrogenase/delta 5-delta 4 isomerase (3 beta-HSD) in human testis as studied by immunocytochemistry

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The enzyme complex 3 beta-hydroxy-5-ene-steroid dehydrogenase/delta 5-delta 4 isomerase (3 beta-HSD) is involved in the biosynthesis of all classes of active steroids, including androgens. To correlate possible changes in 3 beta-HSD with the well-known variations in testosterone secretion during development, the authors localized this enzyme by immunocytochemistry during fetal and postnatal periods of development in the human testis. In the fetal testis, 3 beta-HSD was detected in Leydig cells during the second and third trimester of gestation. In 8-month-old and 11-year-old boys, however, no immunoreaction could be detected in the testis. In pubertal boys, Leydig cells appeared well developed and immunopositive. Since the fluctuations in 3 beta-HSD immunoreactivity are similar to those already observed for androgen secretion, activation of 3 beta-HSD by trophic hormones may play an important role in androgen production during fetal and postnatal development.

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