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## JOURNAL ARTICLE

# Testicular blood flow and fluid dynamics in monkeys with surgically induced varicoceles

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The blood flow rates and ability to remove an added fluid load were studied in the testes of monkeys with surgically induced varicoceles and in sham-operated control monkeys. These studies were conducted to verify a proposed mechanism by which varicocele may cause testicular and spermatogenic damage. Analyses of the data indicated that, at four months after induction, the testes of monkeys with varicocele were less able to remove a perfused fluid load and that, at five months, the blood flow was significantly less in the testes of these animals. The effects were most pronounced in the left testes of the monkeys with varicocele. Blood flow values calculated were: control, right--9.66 ml X 100 g<sup>-1</sup> X min<sup>-1</sup>; control, left--10.42 ml X 100 g<sup>-1</sup> X min<sup>-1</sup>; varicocele, right--7.73 ml X 100 g<sup>-1</sup> X min<sup>-1</sup>; varicocele, left--5.04 ml X 100 g<sup>-1</sup> X min<sup>-1</sup>. These data suggest a new theory, that increased pressure on the venous side of testicular capillary beds in subjects with varicocele may decrease blood flow and cause testicular damage.

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