atrial peptide values with the reduction in sodium intake (figure) may provide one explanation.

The pronounced increase in plasma atrial peptide concentrations on changing from the normal to the high sodium diet but with no concomitant change in blood pressure, and given the potent vascular actions of the atrial peptides,⁵ may perhaps account for the lack of rise in blood pressure with the increase in sodium intake, possibly through a direct vasodilatory action on the arterial or venous system.

In conclusion, our study suggests that in hypertensive patients changes in circulating atrial peptide values with changes in sodium intake may not only contribute to the maintenance of sodium balance but may also contribute to the observed changes in blood pressure.

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Sexually transmitted disease in potential semen donors

Artificial insemination with semen from a donor is a well established procedure for childless couples in whom the male partner is infertile. The serious consequences to the mother and fetus of the many bacterial and viral infections that can be transmitted in semen have recently been reviewed.¹ There are no data on the prevalence of sexually transmitted diseases in potential semen donors, but screening is now recommended.² We studied urethral and serological evidence of infection in a group of such men.

Subjects, methods, and results

Thirty six consecutive heterosexual men who had answered a university advertisement requesting semen donors consented to a genital examination. Two urethral smears were initially taken. One smear was Gram stained and the other examined for *Chlamydia trachomatis* with a monoclonal antibody labelled with fluorescein (Microtrak, Syva). Two further plain cotton urethral swabs were taken and one put in Amies and one in virus transport medium. The swab in Amies medium was cultured for *Neisseria gonorrhoeae*, *Mycoplasma hominis*, *Ureaplasma urealyticum*, *Staphylococcus aureus*, *Gardnerella vaginalis*, *Trichomonas vaginalis*, group B streptococci, and anaerobes. The other swab was cultured for herpes simplex virus.

Serum samples were examined for antibodies to *Treponema pallidum*, cytomegalovirus (by haemagglutination and enzyme linked immunosorbent assay (ELISA)), human immunodeficiency virus (enzyme immunoassay, Abbott Laboratories), and *C trachomatis* (microimmunofluorescence, IgG to serotype L₂) and for hepatitis B surface antigen. Samples of semen were analysed for volume; pH; the density, motility, and morphology of sperm; and the presence of germinal cells, white cells, adenosine triphosphate, and antisperm antibodies (IgG).

The table shows demographic data on the men, most of whom were single students. The mean number of lifetime sexual partners was nine. Five men

admitted to having had episodes of sexually transmitted disease; none had current genital symptoms.

Pathogens were isolated from 12 men, in two of whom two types of urethral organism were found: *C trachomatis* was detected in three; *M hominis* in two; *U urealyticum* in five; and group B streptococci, anaerobes, *G vaginalis*, and *S aureus* each in one. Five men had signs of asymptomatic genitourinary infection, four had non-gonococcal urethritis, and one had penile warts. Serum was positive for antibody to *C trachomatis* in 10 men and for cytomegalovirus in nine. Only 12 men had no history, signs, or serological evidence of infection. No correlation was found between the different seminal characteristics, including the presence of leucocytes, and a positive urethral culture.

Demographic data on 36 potential semen donors

Age (years):	
Mean (SD)	22.9 (5.1)
Range	18-37
Occupation:	
Student	28
Employed	5
Unemployed	3
Marital state:	
Single	34
Married	2
No who were white	33
Median no (range) of sexual partners in three months	1 (0-3)
Median no (range) of sexual partners in lifetime	5 (1-40)
No with regular partner	17
No with previous episodes of sexually transmitted disease	5

Comment

Some of the semen donors in this study had asymptomatic sexually transmitted diseases and had had many sexual partners. Although some of the urethral organisms isolated seemed to be commensal in the donor, they may contaminate semen. Organisms such as *C trachomatis* are known risks for the mother and fetus; we found that serological tests for *C trachomatis* showed low antibody titres and were unhelpful in diagnosing active genital infections. The risk of men with genital warts transmitting genital human papillomavirus is unknown, although deoxyribonucleic acid from human papillomavirus 5 and human papillomavirus 2 has been isolated in semen.³ The detection of antibody to cytomegalovirus, however, is important as men who are seropositive may excrete the antigen in urogenital fluids,⁴ which is a potential hazard for a fetus whose mother is seronegative.

We routinely use frozen semen for insemination by donor and screen all regular donors for antibodies to human immunodeficiency virus, as recommended by the Department of Health and Social Security⁵; at present, however, other common sexually transmitted diseases pose a much greater risk from heterosexual donors.

All potential semen donors should be screened for genital infections. Ideally, the tests should be repeated whenever the men change their sexual partner. Further studies are necessary to compare urethral with seminal cultures and to determine the prevalence of sexually transmitted diseases and their complications in women who are treated by insemination by donor.

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