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JOURNAL ARTICLE

Have sperm counts deteriorated over the past 20 years in healthy, young Japanese men? Results from the Sapporo area

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Changes in semen quality of healthy men is a controversial issue throughout the world. It is suspected that many chemical endocrine disrupters may affect the quality of semen. Although exposure to them may be extensive in Japan, no evidence of changes in semen quality has been reported. In this study, changes in semen volume and sperm counts were analyzed over 20 years in the Sapporo area of Japan. Semen volume and sperm counts were measured in 254 and 457 normal, healthy volunteers who lived in the Sapporo area in 1975-1980 and 1998, respectively. Posters and handbills were used to recruit participants in both studies. Semen samples were collected by masturbation after 3 days or more of abstinence. There was no change in semen volume between 1975-1980 and 1998. Mean sperm counts were $70.9 \pm 47.3 \times 10^6$ /mL in 1975-1980 and $79.6 \pm 49.3 \times 10^6$ /mL in 1998. Sperm counts did not decline over about 20 years. No significant correlation between age and sperm counts was recognized in either study. The rates of subjects with oligozoospermia and azoospermia were the same in both studies. In the 1975-1980 study, 34 of 254 (13.4%) participants had a child, and in the 1998 study, 51 of 457 (11.2%) participants had a child. Mean sperm count was significantly ($P < .02$) lower in the earlier study ($66.0 \pm 44.9 \times 10^6$ /mL) than in the 1998 study ($98.7 \pm 60.2 \times 10^6$ /mL). This is the first reliable report in which changes in sperm counts in Japan were studied. We conclude that there was no evidence of deterioration in sperm counts of normal healthy men who lived in the Sapporo area of Japan over 20 years. However, selection bias in the recruitment of volunteers and the issue of variable abstinence might have affected the results of these studies. Therefore, well-designed prospective studies should be performed in several different regions to extrapolate our results on sperm counts to healthy, young Japanese men in general. Key words: Fertility, endocrine disruptors, seminalysis.

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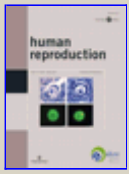
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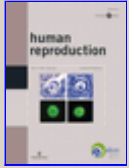
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