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Letters to the editor
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·*Letters to the Editor*·

Effect of electromagnetic field exposure on spermatogenesis and sexual activity

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Dear Sir,

We read with interest the paper by Lee *et al.* [1]. They reported that continuous exposure to an electromagnetic field with extremely low frequency may induce testicular germ cell apoptosis in mice.

Our group performed a series of experiments on the effect of exposure to an electrostatic field on spermatogenesis and sexual activity [2–7]. Polyester (polyethylene terphthalate) exhibited electrostatic potentials (ESPs) in the range of 306–376 V/cm^2 (mean 338.9 ± 25.0) [2, 3]. The effects of polyester underpants on testicular temperature and sperm count was tested on a dog and a human volunteer. Both subjects wore a pair polyester underpants, which fitted loosely around the scrotum [2–5]. The testicular temperature showed no significant changes during the period when the pants were worn. At the end of 24 months, the sperm counts and the motile sperms were significantly decreased and the abnormal forms increased ($P < 0.001$); the testicular biopsy revealed degenerative changes. However, the semen patterns normalized in both the dog and the human once they ceased wearing the polyester pants.

Regarding the effect of the ESPs generated by the polyester underwear on the sexual activity, sexual behavior in rats was assessed before and after 6 and 12 months of wearing the pants and 6 months after their removal [7]. With the pants on, the rate of intromission to mounting (I/M) was significantly reduced compared to the pre-test levels and controls ($P < 0.0001$). Six months after removal of the pants, the I/M ratio returned to the pre-test levels.

The polyester containing pants generated ESPs, which seem to create 'electrostatic fields' in the scrotum and the penile structures, that presumably induce diminished spermatogenesis and sexual activity.

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