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Study Indicates U.S. Males Losing Fertility Potential

WASHINGTON (AP) — The sperm count and fertility potential of American males appear to be dropping and chemical pollutants may be responsible for some of the decrease, a scientist said today.

Dr. Ralph C. Dougherty of Florida State University said a study of 133 volunteer doners indicates that sperm density is continuing a slide other researchers first noticed 30 years ago.

Dougherty, in a presentation at the national meeting of the American Chemical Society, said studies in the United States, Western Europe and Japan indicate sperm concentration is falling in industrialized nations.

"The cause for the apparent decrease in sperm density and thus male fertility is not clear at this point," Dougherty said in a paper reporting on his and his associates' research.

"It is possible that toxic substances in the environment may be partially responsible for this apparent shift," the researchers said.

Dougherty said a 1929 study of American men put the average sperm density at 96 million per milliliter of semen and a 1974 study put it at 65 million.

The new study, conducted mostly with Florida State students, shewed an average of 60 million per milliliter, he said. A milliliter is about one-fifth of a teaspoon.

Dougherty told a news briefing that a sperm density of 20 million per milliliter is considered by many medical authorities as evidence of functional sterility.

Using this criterion, he said, 23 percent of the students in the Florida study were functionally sterile.

Dougherty cautioned that college students may not be typical of the general population and that some apparent sterility may be temporary.

Some studies indicate that stress, cigarette and marijuana smoking and very high sexual activity can lower sperm count — situations that may be more common with college students than others, he added.

Those in the study were asked to abstain from sex for two days before the tests and questioned about their smoking habits, he said.

The chemists said all the semen samples in their study were contaminated with toxic substances at various low levels. The most common chemicals found were polychlorinated biphenyls (PCBs), hexachlorobenzene, pentachlorophenol and byproducts of the pesticide DDT.

Dougherty said an analysis indicates that PCBs, and perhaps their byproducts, may be related to 25 percent of the sperm density variance found.

PCBs are industrial chemicals that have been used for 50 years in many products. They are widespread in the environment. The Environmental Protection Agency has restricted PCBs under the Toxic Substances Control Act of 1976.

Dougherty said a goal of his research is to identify the chemicals that may be responsible for the sperm density decrease and eliminate them from the environment.