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Letters

Radon, cancer and nonsmokers

The New Jersey Department of Health report on radon and lung cancer is not nearly as definitive as your article would suggest ("Home Radon Hazards: All Too Real," SN: 10/27/90, p.260). Smoking, both active and passive, is accepted as the leading cause of lung cancer in both men and women. Smokers who are exposed to high concentrations of radon have a still higher rate of lung cancer. However, only 12 percent of the 994 cases of lung cancer among women over the 1982-88 period cited in this report were nonsmokers, and even fewer (4 percent) were nonsmokers living with a nonsmoking spouse. Among the 61 nonsmoking lung cancer cases out of the 433 included in the radon substudy, no correlation was found with their home radon exposure levels. Indeed, only one of the nonsmoking woman with lung cancer was exposed to a moderate level of radon, and the report indicates that her husband smoked.

Jordan R. Nelson
Pennington, N.J.

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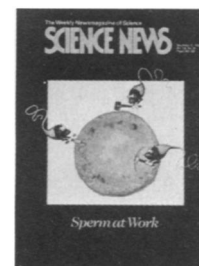
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Cover: Scientists are developing a host of micro-methods — including drilling, blasting and cracking — to give disadvantaged sperm a better shot at penetrating the tough outer shell of a human egg. Although experimental, such techniques may eventually provide some infertile couples with renewed hope of conceiving a child. (Illustration: Mary Seton Puglisi)
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Study leader Janet B. Schoenberg replies: "We agree that smoking is the major risk factor for lung cancer and that radon-related lung cancer risk at low, residential exposure levels is modest in comparison with smoking-related risk. Nonetheless, our study suggests that smokers (particularly light smokers) who have been exposed to moderate residential radon do have higher lung cancer risks than smokers who have been exposed only to very low radon levels."

"Our research reports clearly indicate that radon-risk results for lifetime nonsmokers were inconsistent. However, the absence of a significant finding for nonsmokers in our study does not mean that there is no radon risk for nonsmokers, because of the small numbers in this subgroup in the study. There are several studies underway that will include larger numbers of nonsmoking lung cancer cases, which, when pooled, should have sufficient power to address this important issue."

Magnetic turnoff

Your brief explanation of magnetic resonance imaging ("MRI provides glimpse into

ancient bones," SN: 10/20/90, p.244) left out one important point. Along with the strong magnet aligning the spin axes, an oscillating magnetic field, or radio-frequency pulse, is necessary to bring the spin axes out of alignment with the main magnetic field. When the oscillating field is turned off, it is the radio waves emitted as the axes fall back to their initial alignment that are detected. The main magnetic field is never turned off in the process. No radio waves worth any information are emitted if the main field is turned off and the axes become disordered.

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All letters subject to editing.

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