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Rise in Asthma Cases

Gretchen Vogel's Research News article "New clues to asthma therapies" (13 June, p. 1643) clearly acknowledges that asthma is an inflammatory disease and that it has been increasing in Western societies over the last 35 years. However, the United States is the only country in the world where asthma is most severe among the poorest population (1). In the villages of Africa and Papua New Guinea, as well as in traditional Eskimo society, asthma remains rare among children (2). Over the period when asthma has been increasing, evidence has come from many sources (3) that exposure to indoor allergens, including house dust, is a major cause. We do not know, however, whether increased allergen exposure is a convincing explanation for the increased prevalence and morbidity of asthma. It seems unlikely that changes in exposure to dust mites, domestic animals, and cockroaches have been sufficient or that these different sources have increased in parallel over a 35-year period (4). This has led many investigators to search for other factors in Western society that could have enhanced immune responses to common environmental proteins or decreased the physiological threshold for wheezing in allergic patients (5). The rise of indoor entertainment has had multiple effects, of which more time spent indoors is one (G. Vogel, "Why the rise in asthma cases?", Research News, 13 June, p. 1645). The more disturbing parts of the "Annette Funicello" effect (6) are prolonged periods of sitting and an accompanying decline in outdoor activity. Because of the scale of this phenomenon, the physiological and medical consequences should be taken seriously. The rise in obesity among children reported by the U.S. Surgeon General (7) leaves little doubt that changes in behavior have metabolic consequences, and this is highlighted by evidence for an increase in Type II diabetes among obese children.

Many of us live in a society where too many children have stopped playing outdoors. In part because of fear of crime, this phenomenon is most marked in the inner city. Prolonged exercise, that is, play or walking, appears to be protective against wheezing (8), and this may be a major reason why asthma

remains rare in those countries where outdoor activity is a normal part of life.

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References and Notes

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4. N. Aberg, *Clin. Exp. Allerg.* **19**, 59 (1989); T. Haastela *et al.*, *Br. Med. J.* **301**, 266 (1990); E. A. Mitchell, *Arch. Dis. Child.* **60**, 376 (1985).
5. "Rising Trends in Asthma," CIBA Foundation Symposium (1997); A. Seaton *et al.*, *Thorax* **49**, 171 (1994).
6. Annette Funicello was the leader of the Mouseketeers on the television show "The Mickey Mouse Club" from 1954 to 1962. This show can be credited with persuading a large number of American children to sit indoors when they could have been playing outdoors.
7. *Surgeon General's Report* (U.S. Government Printing Office, Washington, DC, 1996); C. R. Scott *et al.*, *Pediatrics* **100**, 84 (1997); S. L. Gortmaker *et al.*, *Arch. Pediatr. Adolesc. Med.* **150**, 356 (1996).
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Corrections and Clarifications

In the Random Samples item "Odd visitor from the Oort cloud" (10 Oct., p. 229), Paul Weissman was incorrectly described as the discoverer of object 1996 PW. The asteroid was found by Eleanor Helin and colleagues on the Jet Propulsion Laboratory Near Earth Asteroid Tracking team, and the unusual orbit of 1996 PW was recognized by Gareth Williams of the Minor Planet Center.

Letters to the Editor

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