child should be re-evaluated for evidence of peanut and nut specific IgE antibodies and clinical reactivity to peanuts.

The initial step in managing any patient with suspected peanut or nut allergy is to positively identify the food that is provoking the allergic reaction. When the patient's history and laboratory studies are not definitive, this may require a food challenge supervised by a physician in a specialised centre. Food allergic individuals at increased risk for severe anaphylactic reactions—that is, patients with histories of previous severe anaphylactic reactions or asthma, or both—should be provided with self injectable adrenaline (such as Ana-Kit or Epi-Pen) and antihistamine (liquid diphenhydramine or hydroxyzine). In a survey of patients with peanut allergy, Bock found that 25% had experienced an accidental ingestion and reaction in the past year (SA Bock, personal communication). The patient, parent, and any care providers should be given detailed information about the allergy, how to recognise anaphylaxis, how to administer adrenaline and antihistamine, and a detailed "emergency plan" for transporting the patient to a medical facility. About a third of children with fatal or near fatal reactions experienced a recurrence of anaphylactic symptoms, so all patients with systemic symptoms should be observed for at least four hours.⁶

An educational process is vital to ensure that the patient, family, and any care providers understand how to avoid all forms of peanut and nut allergens and the potential consequences of an inadvertent ingestion. Groups such as the Food Allergy Network in the United States and the British Allergy Foundation and the Anaphylaxis Campaign in Britain can provide patients with information about food allergen avoidance and educational materials for schools and parents of children with food allergies and anaphylaxis. When eating outside the home, people allergic to peanuts and nuts must always be extremely cautious and should not hesitate to ask specific and detailed questions about the preparation and ingredients of foods they are planning to eat. Peanut and nut products may be encountered at any meal—in breakfast cereals, trail mixes, chili and spaghetti sauces, gravies, oriental cooking (including

egg rolls), pastries, sweets, ice creams, desserts, and as garnishes for almost any food. Simply removing peanuts and nuts from a dish does not remove the contaminating protein. In addition, foods may be contaminated with peanut protein from "pressed or extruded" peanut oils, or oils or utensils used to cook foods containing peanuts. Unfortunately, it is not uncommon for patients dining in restaurants to react to a food that they were assured by a waiter did not contain peanuts or nuts. If there is any doubt about a food's ingredients, peanut and nut allergic individuals must not eat it.

Finally, the medical community should put pressure on governmental agencies responsible for product labelling and purity. All foods known to contain even minute amounts of peanut or nuts should be clearly labelled. Cross contamination in packaging and production plants is not infrequent, and when it occurs, there needs to be a system which provides this information quickly to the public. In addition, funding for research on the basic mechanisms of food allergy and potential therapeutic interventions needs to be increased.

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Smoking in public places

Self regulation of businesses is not working

Britain's environment minister, James Clappison, has released results of a National Opinion Poll study of provision of smoke free indoor environments by businesses that deal with the public.¹ Attempting to put a flattering spin on the findings, his press release claims "a substantial increase in the number of establishments covered by a smoking policy (between 1992 and 1995). In the travel sector, the percentage has doubled." But reading the report itself, only those content with bleak expectations bound to the incrementalist gains of self regulation could share the minister's enthusiasm. Only 38% of businesses in the travel sector were described as having effective policies. Just 36% of restaurants qualified and, most damning, even health establishments (at 71%) failed to reach the government white paper's modest target of 80%.²

Workplaces and restaurants are the public venues that expose the greatest number of people to environmental tobacco smoke. Because of their prolonged exposure,^{3,4} staff in bars and dining rooms are most at risk; the 50% increase in lung cancer risk among food service workers may be in part attributable to workplace exposure to tobacco smoke.⁵ Levels of environmental tobacco smoke in restaurants have been found to be double those in offices and 1.5 times higher than in homes with at least one smoker.⁵ Levels in bars can be more

than six times those in offices that allow smoking.⁵ In Australia, concern about litigation from staff is now driving workplaces to become smoke free faster than is nominal concern for workers' health and amenity (National Heart Foundation of Australia, personal communication).

While public preference for smoke free dining is growing, restaurateurs often grossly underestimate the potential demand. An Australian study surveyed restaurateurs and their patrons to determine whether restaurateurs' perceptions and policies matched customers' preferences.⁶ While less than 2% of restaurants were totally smoke free and 22% provided some smoke free areas, 47% of patrons dining in those restaurants stated that they believed restaurants should be totally smoke free, with a further 42% supporting smoke free areas. Only a third of restaurateurs who thought they should provide smoke free areas actually provided them.

In the report of the National Opinion Poll, 76% of restaurateurs believed that a policy to ban or restrict smoking would harm their business.¹ Californian laws require smoking areas to be separate and ventilated, and New York City bans smoking in restaurant dining areas with more than 35 seats. About 11 000 of some 15 000 restaurants are affected. Analysis of American restaurant sales tax data shows no evidence that

banning smoking in restaurants depresses patronage. A three year survey from the Centers for Disease Control of eight restaurants in a suburb of Austin, Texas, found a slight increase in restaurant sales after a local ordinance requiring restaurants to be smoke free took effect.⁷ In Massachusetts, more upmarket establishments may have actually increased takings.⁸ The largest of the studies found no significant differences in restaurant sales between 34 communities that banned restaurant smoking and 102 communities that had not.⁹

A former president of the Beverly Hills [California] Restaurant Association, formed by the tobacco industry to oppose the 1988 legislation, later testified before the New York City Council. He said, "The tobacco industry repeatedly claimed that Beverly Hills restaurants suffered a decline in revenues. Sales tax data, however, showed an increase. I regret my participation."¹⁰

Arbitrary "magic line" divisions between smoking and non-smoking sections in restaurants are popular concessions to "progress." But a non-smoking section in a restaurant is about as meaningful as a non-urinating section in a swimming pool. While such sections have reduced levels of environmental tobacco smoke, they do not eliminate it. A study of seven restaurants that restricted smoking to one third of the seating area found mean concentrations of respirable suspended particles and nicotine were 40% and 65% lower, respectively, in the non-smoking than in the smoking sections.¹¹

British industry's self regulatory dawdle toward smoke free

restaurants and workplaces is evident in the National Opinion Poll report.¹ The sawdust commonly found on cafe floors of the last century, placed—along with spittoons in more genteel establishments—to soak up spittle, are things of the past thanks to concerns about public health.¹² The same cannot be said of smoke filled rooms, where lack of political will is making a mockery of Britain's national smoke free target.

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Chernobyl 10 years on

Thyroid cancer may be the only measurable health effect

See pp 1078, 1107

The beautiful countryside around Chernobyl belies the fact that this is the site of the world's worst nuclear accident. The explosion at the Chernobyl nuclear power station 10 years ago released radiation 200 times the level of the combined release from the atomic bombs dropped on Hiroshima and Nagasaki in 1945. The explosion rendered an area of 30 km radius—the size of the area enclosed by the M25 motorway around London—uninhabitable for humans possibly for generations to come. Of the 400 000 people relocated because of the explosion 135 000 once lived within the 30 km zone. The physical effects of the explosion are still visible enough, but the health effects are not at all apparent. Although at least 30 of the workers involved in the clean up operation died, the experience of Chernobyl illustrates well the difficulties of assessing the health effects of a nuclear accident.

Visit the hospital in the village of Kotzubinskaya, just outside the 30 km zone, and there are wards with children suffering with diabetes, testifying to the severe shortage of insulin. This general picture of a lack of modern medical facilities and shortage, or even absence, of basic drugs is repeated in other hospitals. Like many groups our team from Bristol has visited Chernobyl intending to help the children cope with the effects of radiation, but in practice we have helped to provide for much more basic health needs. This is the context in which the health effects of the Chernobyl accident have to be seen.

The accident occurred on 26 April 1986, but substantial radioactive emissions persisted for 10 days. Although 70% of the contamination occurred in neighbouring Belarus, changing wind direction in those 10 days ensured that large parts of the Ukraine, including Kiev, and the Bryansk area of Russia were badly affected. Further afield, few parts of Western Europe escaped detectable fallout radioactivity.

Radioactive iodine, predominantly iodine-131 with a half life of eight days, was the most important source of exposure during the

first few weeks after the accident. On ingestion or inhalation it is rapidly taken up by the thyroid, especially in children under 3 years. Given that the populations were iodine deficient the uptake was probably even more rapid. Contemporaneous measurements in children of the Gomel and Mogilov regions of Belarus, 300 km from Chernobyl, recorded that in 1% of children doses to the thyroid exceeded 10 Gy. If such doses were accrued by the whole body survival would be unlikely.

Excess cases of thyroid cancer in children, mainly centred on the most contaminated areas, have been a clear consequence of the accident.^{1 2} These appeared three to five years after the accident, earlier than might be expected. In Belarus, the Ukraine, and south west Russia there have been over 600 cases to date, a 100-fold increase on the normal incidence of 0.5 cases per million per year. Ninety per cent of the thyroid cancers were the papillary type, and in the most contaminated regions almost all were highly invasive, spreading both within the thyroid gland and into surrounding tissues. Their invasive nature has resulted in the deaths of a few children, where otherwise the tumours would have been successfully removed.

The chief radionuclide contamination now consists of caesium-137 and strontium-90, with half lives of 30 and 29 years respectively. The levels of ¹³⁷Cs in surface soil extend to well over 1000 kBq/m² and to an area over 30 000 km². These numbers are large, but in fact little appears to have been transferred to the general population.³ Whole body measurements of ¹³⁷Cs have now been made in tens of thousands of people. Typical values yield doses no more than 5% of that received by natural radiation, and even the dose rates of 5 mSv per year recorded in some cases are less than those received by the average Cornwall resident from domestic radon exposure. A paper in this week's journal shows that even workers who took part in the clean up after the accident did not receive substantial doses.⁴