

By VICTORIA LAMBERT

**W**E'RE all aware of the dangers of second-hand smoke; only recently, a leading doctor said smoking should be banned in cars carrying children.

But could there be even greater worry? Could you suffer the effects of passive smoking from simply travelling in a smoker's car — even if they haven't lit up? Is that nasty ash-tray tang that lingers on car-seat fabric, curtains in homes and the clothes of the nicotine addict strong enough to damage other people's health?

According to some experts, third-hand smoke, as it is known, is as dangerous to health as the fumes billowing directly from a pipe or cigarette, particularly for babies and children.

A recent report in America has warned that even if you don't smoke in front of your family, you might be putting them at risk of cancer or delaying the development of their brain, thanks to polluting their environment with a lingering chemical cloud.

The warning came from a paper produced in the respected journal Paediatrics earlier this year. The study surveyed more than 1,500 households, learning that just 26.7 per cent of those that included a smoker had strict rules about not smoking in the home.

'The dangers of third-hand smoke are very real,' explained the leader of the study, Professor Jonathan Winickoff, of Massachusetts General Hospital, Boston.

'Toxic particles in cigarette smoke can remain on nearby surfaces long after the cigarette has been put out, meaning the sofa is potentially as problematic as the ashtray itself.'

Small children and babies are particularly susceptible because they crawl on the carpet and are likely to breathe in close proximity to smokers, or even lick and suck clothing or items that smokers have touched.

**P**ROFESSOR Winickoff is also concerned about new mothers who smoke, saying: 'When you're near your baby, even if you are not smoking, the child comes into contact with those toxins. And if you breastfeed, the toxins will transfer to your baby in the breast milk.'

According to the National Toxicology Program in the U.S., tobacco smoke contains about 4,000 chemicals, including 250 poisonous gases and metals including butane (used in lighter fuel), arsenic, carbon monoxide, benzene, toluene (found in paint thinners), ammonia, chromium (used to make steel), cadmium (used to make batteries), lead and hydrogen cyanide (which is used in chemical weapons).

The smoke even contains polonium-210 — the highly radioactive carcinogen used to murder Russian spy Alexander Litvinenko in London in 2006. Experts fear that these particles are carcinogenic and that some of the toxins may affect brain development in young children, who may be more affected than adults as their bodies and brains are still growing.

And these concerns are not confined to the Americans.

'Parents who smoke should be aware that when they cuddle or hold a child on their lap, they are



Picture: SCIENCE PHOTO LIBRARY

# How cigarette smoke in your carpet could harm your baby

exposing them to the smoke on their clothes,' says Professor Ros Smyth, head of the Division of Child Health, University of Liverpool. 'They should be particularly aware if they have a child with a respiratory problem such as asthma.'

It's a question of risk, says Professor Andrew Shennan, of baby charity Tommy's: 'You wouldn't go into a room full of asbestos, so would you go into a room full of other toxins?'

Earlier this year, two students in San Antonio, Texas, won an award at the Intel International Science and Engineering Fair, for an experiment on fruit fly larvae that had been exposed to foam saturated with tobacco smoke.

The pair observed a high number of mutations which could influence scientific knowledge of the effect of environmental — or third-hand — smoke on humans.

Meanwhile, a San Diego study in 2004 discovered that in households where there was a smoker, although all smoking was done outside children still had nicotine in strands of their hair and in their urine; mothers who smoked away from their children were found to have nearly as much nicotine on their hands as smokers who made no special effort.

This new research on third-hand smoke builds on previous studies into second-hand smoking, or

passive smoking — inhaling someone else's cigarette smoke.

The original passive smoking studies began in the Seventies and although the initial findings linking passive smoking to disease were contested by the industry, it is now accepted that there is a clear link.

In 2004 the World Health Organisation declared that scientific evidence unequivocally established that exposure to tobacco from passive smoking causes death, disease and disability.

It also found that the risk for lung cancer when a spouse smoked was 20 per cent for a woman, and 30 per cent for a man. It's estimated heavy exposure to cigarette smoke at work pushes this to 50 per cent.

The danger with passive smoking is so-called 'side stream' smoke — this is full of the same toxins as the 'mainstream smoke' inhaled directly by the smoker from the filter end of the cigarette, but comes from the burning tip of the cigarette.

Indeed, fresh side-stream smoke is actually four times more toxic than mainstream smoke, according to research from the Center for Tobacco Control Research and Education at the University of California.

The report concluded: 'Smoke-free public places and workplaces are the only practical way to protect the public health from the toxins in side-stream smoke.'

Further studies have shown that children who passively smoke as a result of living in households

where there is a smoker are more likely to suffer from respiratory disease, asthma attacks, middle-ear infections and cot death.

The increasing weight of the evidence about the dangers of passive smoking led many countries to consider smoking bans in enclosed public places, with Norway the first to go smoke-free in 2004, Italy in 2005 and the UK in 2007.

**D**OCTORS and health workers have already noted a corresponding fall in the number of hospital admissions for heart-related conditions.

So what can the smoker parent do — apart from give up? American paediatrician Alan Greene suggests filling the house with green plants to freshen the air as they can remove toxins from the atmosphere by absorption, and regularly repainting walls with non-toxic paint to cover the toxic particles.

Clothes worn when smoking should be washed before contact with a child, and sofas scrubbed clean regularly.

And if you're not sure if your home smells of tobacco, ask a non-smoker for the home truth; many smokers lose their sense of smell.

'We all want to avoid exposing children to adverse things,' says Professor Shennan, 'so until we know the real dangers, why take the risk?'

## under the microscope

Author and former hostage Brian Keenan, 58, answers our health quiz



### CAN YOU RUN UP STAIRS?

I WOULDN'T call myself super-fit, but I can run up the stairs. I've got an Irish setter, Kerry, who I walk most mornings, and that keeps me in reasonable shape.

### SLEEP WELL?

I OFTEN wake up a couple of times in the night, and I invariably get up early, sometimes before six. It's partly a hangover from my Lebanese days, where I was working as an English teacher. You wake early because of the call to prayer. As a result, I often cat-nap — my wife's always catching me dozing off.



### WORST ILLNESS?

I GOT scarlet fever as a child. I remember being moved into my parents' bed and feeling the heat of the fire on my face. Thankfully, I got over it within a week.

### POP ANY PILLS?

I DON'T take any medicines or pills — for anything. They scare me. And I'm sure I don't get any more colds than anyone else. My motto is: steer clear of doctors.

### EVER DIETED?

A COUPLE of years ago I decided to go on a diet because I was putting on weight due to my sedentary occupation as a writer. I'm only a little fella — 5ft 6in — but I was pushing 15st. It was nothing drastic, just a diet of moderation, cutting down on food and drink generally. It seems to have worked — I've lost a couple of stone.

### IS THERE A MALE MENOPAUSE?

I THINK a lot of men hit the wall, so to speak, in their 40s and 50s. They have a mini-crisis, knowing any change of job is likely to be their last career change, and take a life review. But I think I've been spared it. In 1986 I was kidnapped while working in Beirut and held hostage by Islamic Jihad. And after being locked up in a cell for four years, you do enough reviewing to last a lifetime.

### CAN'T LIVE WITHOUT?

ONIONS. When I was a kid I used to eat onions like apples. If I could, I'd use one in everything I cooked.



### ANY FAMILY AILMENTS?

MY FATHER died of a heart attack in his 60s, and my mother died of Alzheimer's in her 80s. But other than look after yourself, what can you do about it?

### IS SEX IMPORTANT?

ABSOLUTELY. We all know what happens to people who try to suppress their sexual feelings. Just look at the Catholic Church! Sex is a gift — it's naturally given to us and is life-enriching.

### EVER BEEN DEPRESSED?

HAVEN'T we all? But if I do succumb to that 'locked in' feeling, I exercise, which I've always found helped me out of a mental trough. It was exercise which helped me survive my four years of captivity. I would spend hours doing push-ups and anything I could do, despite the fact that I was tied to a wall with an 18in chain for much of the time.

### LIKE TO LIVE FOR EVER?

I'D LOVE to — and I'm miffed about the fact that I can't. There are so many things I'd still like to do, such as spend time with my grandchildren, which is unlikely, given that I didn't become a father until I was 47 — quite late in life.

■ I'LL Tell Me Ma. A Childhood Memoir by Brian Keenan (Jonathan Cape) is available from Sept 12, £16.99.

Interview: YORK MEMBERY

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