Heart attacks and the Newcastle earthquake

To the Editor. I would like to comment on the article by Dobson et al published in the Journal recently.

The objective of the article is given in the summary as: "To test the hypothesis that stress generated by the Newcastle earthquake led to increased risk of heart attack and coronary death."

In the article, the number of heart attacks in the four-day period after the earthquake was compared with the number of heart attacks at a corresponding time of year in previous years.

One may not test a hypothesis using data that one has used to form that hypothesis, for the same reason that a bookmaker will not accept a bet on a race after that race has been run.

The authors should have contained a statement of the hour and date that the study design was agreed upon by the authors. If the study design was agreed upon some days after the earthquake, then the article should have been presented as the reporting of observations and not the testing of a hypothesis. This is because the authors may have had some information about the number of heart attacks after the earthquake, and this may have influenced their decision to pursue the testing of the hypothesis.

Laurence W Rose, MB BS

In reply Alan the Newcastle earthquake was widespread public concern about the health effects of the resulting "stress". The World Health Organization MONICA Project - which had been collecting data according to well established criteria for several years before the earthquake and continued to do so throughout the immediate period of the earthquake and into the future - provided a means of investigating the issue. The Project offered the potential to yield results that are not confounded and that is possible from the usual studies in which data are collected retrospectively after a disaster.

Our review of the literature suggested that we should investigate two possible outcomes. One outcome, based on retrospective studies after earthquakes in Greece, was that there would be an increase in coronary deaths in the few days immediately after the earthquake. The other followed from less specific observations of longer-term health consequences of earthquakes. Thus we analysed our data specifically to look at these two issues. We assure Dr Rose* the questions preceded the answers, not vice versa.

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Pesticides and other chemicals in cigarette tobacco

To the Editor. The Federal Government is to be congratulated on recent moves to increase the impact of health messages on cigarette packets. Decisions about the content of such messages have to balance the consumer's "right to know" against such issues as the need for health information to be simple and direct. An interesting case in point concerns the presence of chemical residues of literally thousands of toxic substances in factory-made cigarettes, including arsenic, cyanide, DDT and asbestos.

The April 1982 meeting of theMinisterial Council on Drug Strategy took the view, previously adopted by the NHRMC, that the threat to health posed by these substances was far too distant compared to that from tar, nicotine and carbon monoxide - substances which are already listed on all cigarette packets. The underlying ethical dilemma is highlighted by findings from a study of smokers' views on this subject conducted by the National Centre for Research into the Prevention of Drug Abuse.

A telephone survey of 1,118 smokers aged 16 years and over drawn from Western Australia, New South Wales and Queensland was conducted. Face-to-face interviews of 50 adolescent and 210 adult smokers were also conducted.

Respondents had high degrees of knowledge about the presence of tar and nicotine in cigarette tobacco but few were aware of the presence of carbon monoxide or other toxic chemicals. The Table summarises answers to the open-ended question "What harmful substances are found in cigarettes?" and to closed questions asked in the form "Is substance A found in cigarettes?" Two non-exertory substances ("glucose" and "monosodium bromide") were included among questions asked in the latter form as a control for respondents' guessing.

Two-thirds of respondents were aware of the tar yield of their own cigarettes and had selected their brand accordingly on the basis only 25% could accurately recall nicotine levels although many claimed their brand selection was influenced by this information. Half the smokers in the three-State survey wanted more information on cigarette packets before being informed about the presence of pesticides at tobacco. The Informative nature of this extra information was quite diverse. Even when informed that the levels of toxic chemicals in tobacco posed little threat to health, 85% of respondents believed that tobacco companies should inform smokers about their presence. Two-thirds stated that pesticide/chemical warnings which specifically mentioned arsenic, DDT and asbestos would induce them to cut down or quit smoking. This was especially true for smokers who were already contemplating quitting and was also heightened in a majority of those who had said they did not wish to quit prior to being exposed to the warning. Eighty-two per cent of respondents aged 18 years and under stated that pesticide/chemical warnings would worry them and induce them to quit. It would appear that information about the presence of toxic chemicals other than tar and nicotine is less new and arousing to smokers. Such information now may provide extra motivation for some smokers to quit. Some would argue that, in any case, consumers have a "right to know" what they are smoking - a view which also seems to be held by most smokers.

These findings are reported merely to highlight an ethical dilemma and are not intended as criticism of the extensive new regulations proposed for the labeling of tobacco packs.

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Cholera in Adelaide

To the Editor. Last year, an editorial in the Journal discussed the recent pandemic of cholera and its implications for our community. We wish to draw the attention of your readers to a case currently under our care.

A 58-year-old Caucasian resident of Adelaide returned home with diarrhoea after a 10 day visit to Bali. He had spent his holiday at a recognised tourist resort and eaten all his meals at the resort or adjacent restaurants. He developed coryza the following day and loose stools 30 hours before returning to Australia. He became ill that he was admitted to hospital within two days of his return to Adelaide. He had required 36 L of fluids intravenously and on one day alone was given 12 L of fluid containing 1800 mmol of sodium and 500 mmol of potassium. In the first 24 hours of hospitalisation he passed 9 L of stool that was later more than double this amount.

Fecal microscopy on the day of admission was unhelpful, and no ova, cysts or parasites were identified. It was assumed that the acute diarrhoea was secondary to a Salmonella illness caused by an enterolith-producing Escherichia coli (ETEC). The large volume waist-like diarrhoea persisted and it rapidly became apparent that this was no ordinary diarrhoea. Therefore

Smoke awareness of the presence of harmful substances in cigarettes (n=610)

<table>
<thead>
<tr>
<th>Substance</th>
<th>&quot;What harmful substances are found in cigarettes?&quot; (n answering yes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicotine</td>
<td>99.0%</td>
</tr>
<tr>
<td>Tar</td>
<td>94.9%</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>85.7%</td>
</tr>
<tr>
<td>Arsenic</td>
<td>84.8%</td>
</tr>
<tr>
<td>Cyanide</td>
<td>75.7%</td>
</tr>
<tr>
<td>DDT</td>
<td>71.5%</td>
</tr>
<tr>
<td>Lignin</td>
<td>46.1%</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>25.6%</td>
</tr>
<tr>
<td>Lead</td>
<td>25.4%</td>
</tr>
<tr>
<td>Methanol</td>
<td>21.4%</td>
</tr>
<tr>
<td>Radium</td>
<td>19.2%</td>
</tr>
<tr>
<td>&quot;Mono-sodium bromide&quot;</td>
<td>16.4%</td>
</tr>
</tbody>
</table>

In reply: "Smoke awareness of the presence of harmful substances in cigarettes (n=610)"