

an informed discussion should take engineering literature into account. In urban areas, where Maimaris and colleagues recognise that most cycle accidents occur, the apparent separation of cycle paths from adjacent roads is often spurious because cycle traffic repeatedly crosses motor traffic at cross roads and junctions. Sight lines at these crossing points are typically inadequate, the right of way is unclear, and the parties may be oblivious of each other's presence. Design standards in the United States strongly discourage the construction of separate cycle paths adjacent to roads or the use of pavements as cycle paths.<sup>3</sup>

A recent study found that urban cyclists riding on a pavement or cycle path adjacent to a road were 1.8 times more likely to collide with a motor vehicle as cyclists riding on roads (a significant difference at the 1% level).<sup>4</sup> Among the cyclists using a separate path, the risk of collision for those travelling against the direction of adjacent traffic was 4.5 times higher than that of cyclists travelling with the traffic flow ( $P < 0.0001$ ). Cycling on separate paths promoted this hazardous travel: 32% of cyclists on paths rode against the flow of traffic, compared with only 5% on roads.

Cycling on roads in the same direction as adjacent traffic was not associated with increased risk for either sex of any age group. Thus, the aim of a well designed road system should be to integrate bicycles and motor vehicles, not to separate them.

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## Impairment of driving by ciprofloxacin

EDITOR.—Ciprofloxacin is a 4-quinolone antibacterial agent. It is recognised to be potentially neurotoxic in both animals and man. The most commonly reported central nervous system side effects include dizziness, headache, and nervousness,<sup>1,2</sup> which may impair the ability to perform skilled tasks such as driving. Appropriate counselling is therefore advised for any patient for whom ciprofloxacin is prescribed, as outlined in the *British National Formulary*. The importance of this advice was highlighted when a colleague taking ciprofloxacin felt that she was not in control of the car while driving. She had not received a warning from either her general practitioner or her pharmacist.

A postal questionnaire was sent to 204 general practitioners and 205 pharmacists in the St Helens and Knowsley District of Merseyside to determine the proportion of general practitioners and phar-

macists who routinely caution patients that their ability to drive might be affected while taking ciprofloxacin. The questionnaire listed several items of information which might be given to the patient (either verbally or written on the label) when prescribing or dispensing ampicillin, ciprofloxacin, or metronidazole. Ampicillin was included in the questionnaire as an example of a commonly prescribed antibiotic and metronidazole as a drug which has a well recognised adverse reaction with alcohol. The recipients of the questionnaire were asked to indicate the information routinely given for each antibiotic. Overall, 300 replies (73%) were received, 151 (74%) from general practitioners and 149 (73%) from pharmacists. The results are shown in the table.

Most general practitioners and pharmacists give the patient general information about antibiotics and will warn of the potential dangers of taking alcohol with metronidazole. However, only 9% of general practitioners and 43% of pharmacists routinely caution patients about driving while taking ciprofloxacin.

On 1 January 1994 regulations came into effect following a European Commission directive which requires all newly licensed medicines dispensed in an original pack to be accompanied by a patient information leaflet.<sup>3</sup> Other products, including ciprofloxacin, will have to conform as their licenses are renewed. Until all medicines are dispensed in an original pack with a patient information leaflet, it is impossible to be certain how much information patients receive.<sup>4</sup>

The side effects of ciprofloxacin on the central nervous system do not seem to be widely recognised. It is essential that patients are warned of them so that potentially hazardous tasks such as driving or operating machinery may be avoided.

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## Patients' rights in the Netherlands

EDITOR.—The board of the Netherlands Epidemiological Society, which has 850 members, was surprised to read Tony Sheldon's restrictive interpretation of a proposed Dutch law concerning patients' rights, which has not yet passed the First Chamber in the Netherlands.<sup>1</sup> Sheldon reports that the proposed law formed the basis of a document on patients' rights endorsed by 36 European nations after consultation by the World Health Organisation.

The Netherlands Epidemiological Society has collaborated closely with health lawyers, government officials, and politicians to ensure that the new law will permit non-experimental clinical and epidemiological research based on data on patients. We specifically emphasised the rights of future patients, whose treatments should be influenced by results of analyses of data on patients collected systematically in the past. Such research implies adequate access to the data. This is especially true for studies of side effects of treatments and preventive interventions. Sheldon's statement that data on patients for this type of observational research will be made available only after coding by a third party only partially reflects the proposed law. While creating the possibility that coded data can be studied (after the implicit non-refusal of patients) the law does not restrict possession of the key to the code to an independent body. Flexibility is necessary in case data on exposure to disease or on outcomes of disease need verification or interpretation direct from the records. Also, the proposed law does not require that identifiable data or material remain confidential after death.

Finally, all organisations in the Netherlands that have collaborated to arrive at this balanced solution have agreed, with the support of representatives of all political parties in the Chamber of Commons, that possible harmful effects of this law on the quality of health care and research should be monitored. Using this law as the basis for an international patient charter seems premature; the best course for the Department of Health in Britain may indeed be to "wait for the WHO report, then consider it."

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- 1 Sheldon T. Europe backs new declaration on patients' rights. *BMJ* 1994;308:997. (16 April.)

## Genesis of apoptosis

EDITOR.—H Konrad Muller's preoccupation with historical accuracy in his letter on apoptotic priorities<sup>1</sup> would be served better by studying an earlier period.

Robert Schröder described the phenomenon in 1914 in a paper on menstruation<sup>2</sup> regularly cited in earlier monographs on gynaecological pathology<sup>3</sup> for its originality, merit, and acclaimed diagnostic value. With exemplary deduction he described the presence, significance, and immense predictive power of the minute particles of pyknotic chromatin which appear in the subnuclear zone of the endometrial glands in the two or three days before menstruation.

Although well aware that the chromatin granules were products of individual cell death (Kernzerfallsfigurin), Schröder wisely named them without any hint of functional speculation or interpretation. His very simple descriptive term, Pyknosen, describes vividly and unerringly exactly what is seen—pyknotic bodies.

Schröder's illustration, made without the benefit of photomicrography, is executed to perfection in pen and ink, aided only by a drawing prism. Instantly recognisable, it leaves no doubt that the Pyknosen are identical to the apoptotic bodies subsequently published without reference to his original description.<sup>4</sup> He enjoyed the obvious antithesis and, with less contrivance than his successors, wrote, "Die Erscheinung der Pyknose steht in einem direkten Gegensatz zur Mitose."

Information routinely given by general practitioners and pharmacists when prescribing or dispensing ampicillin, metronidazole, or ciprofloxacin

Information given	Antibiotics	No (%) of GPs	No (%) of pharmacists
Dose and duration	Ampicillin, metronidazole, ciprofloxacin	140 (93)	142 (95)
Complete the course	Ampicillin, metronidazole, ciprofloxacin	119 (79)	143 (96)
Avoid alcohol	Metronidazole	122 (81)	148 (99)
Take before food	Ampicillin	36 (24)	137 (91)
Possible impairment of skilled tasks (driving, etc)	Ciprofloxacin	14 (9)	64 (43)