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Correspondents are urged to write briefly so that readers may be offered as wide a selection of letters as possible. So many are now being received that the omission of some is inevitable. Letters should be signed personally by all their authors.

Interactions with Monoamine Oxidase Inhibitors

SIR,—This company receives almost weekly a number of inquiries on the possible hazards to patients and adverse effects of taking certain foodstuffs, drinks, and other drugs while on phenelzine. Despite considerable efforts on our part to disseminate factual information on these aspects of monoamine oxidase inhibitor (MAOI) therapy we are becoming increasingly concerned, as these inquiries show a repeated and continuing misunderstanding of the problem. It would appear that many doctors in general practice and psychiatrists in hospital who actually start a patient on a MAOI drugs have an incomplete appreciation and at times erroneous knowledge of interactions. Their misunderstanding in many instances appears to be based on rather tenuous evidence from a single reported adverse reaction. This interaction is then perpetuated in the literature by succeeding authors who rarely take the trouble to read the original report or substantiate the reaction. In this way the reported interaction acquires unwarranted and unrealistic importance.

The case of bananas is a particularly bizarre example. Saw-Lan Ip in 1966[1] speculated on the possibility of hypertension arising from the pressor effects of the 5-hydroxytryptamine content of bananas but this was never confirmed. However, present fears of adverse reaction appear to stem from one reported case of a hyptensive crisis occurring in a patient who ate whole green bananas stewed in their skins.[2] In fact, while banana skin does contain a fairly high level of tyramine (65 μg/g) the level in the pulp is insignificant.[3] Another constantly recurring example is broad beans. Many patients write to us saying they have been told by their doctor or psychiatrist to avoid eating "beans," no qualification being given as to whether there are French beans, broad beans, baked beans, etc. Even where broad beans are specified it is surprising how few doctors appreciate that only the pods have been shown to constitute a hazard with MAOIs, as the L-poda content lies wholly in the pod. As with banana skins, there must be very few people in the United Kingdom who eat broad-bean pods. Hence two foodstuffs are prohibited to patients when only the skin or pod is the offending item.

The prohibition on alcohol is a constantly recurring point in correspondence, and doctors and patients alike write to us asking how much alcohol can be regarded as safe or what limit of a particular wine or spirit they must not exceed. It is extremely difficult to arbitrate on such a matter, as the interpretation of an "occasional glass" or "a small sherry" can vary from patient to patient. It is now generally accepted that a small intake of sherry, beer, or port consisting of a single glass would be unlikely to present any hazard because of the very low tyramine content of these alcoholic beverages. On the other hand, Chianti should certainly be avoided since a quantity of 400 ml could contain enough tyramine to cause a reaction in a patient taking an MAOI.

With regard to other drugs and MAOIs, areas of popular confusion are those of analgesics and local anaesthetics. Advice is often asked by dental practitioners on the safety of using local anaesthetics incorporating adrenaline or noradrenaline. It was once thought that the effects of these two catecholamines would be potentiated in patients on MAOIs, but it has since been shown that this is not the case.[4] The *British Dental Journal* has stated that "local anaesthetic solutions containing adrenaline or noradrenaline present no special hazard to patients who are taking MAOI antidepressant drugs."[5] Nevertheless it still appears that many doctors and dentists view a dental extraction under local anaesthesia as a potentially hazardous procedure in MAOI patients and warn against it. While it is widely known that pethidine and morphine are contraindicated, there is some uncertainty about the use of alternative analgesics. The fact that narcotic analgesics other than pethidine or morphine may be used with caution by MAOI patients is surprisingly unappreciated.[6]

The danger of adverse and even fatal reactions between MAOIs and foodstuffs appears to be overestimated, no doubt owing to publicity in the lay press when any such misfortunes occur. It may come as a surprise for doctors to learn that only 17 cases of reactions (none fatal) between phenelzine and foodstuffs were reported either to ourselves or to the Adverse Reactions Committee of the Committee on Safety of Medicines between January 1964 and June 1973.[7] Nor has there been reported to us any fatal reaction between phenelzine and a foodstuff since the latter date.

Despite the issue of warning cards on prohibited foods and drugs by the B.M.A., the Association of British Pharmaceutical Industry, the Pharmaceutical Society, and most companies, including ourselves, who manufacture MAOIs a considerable body of medical, quite apart from lay, opinion appears to have an incomplete and at times inaccurate appreciation of the whole food problem with these drugs. We have felt for some time that it would help to disseminate more widely the factual evidence on these hazards if an authoritative statement from some body such as the Committee on Safety of Medicines were to be made setting forth the true facts on interactions between foods or drugs and MAOIs. It would put the whole situation in perspective and would be a valuable contribution to patient safety in MAOI therapy. With this in view I have written to the Committee on Safety of Medicines asking if they could help to clarify the problem where obvious misconceptions presently exist, both authoritatively to inform the doctor and to reassure the patient. They do not feel, however, that they can modify at present the views expressed in their Adverse Reactions Leaflet No. 1, and they think it seems best to avoid publicizing food hazards. While I must agree that to increase the list of possible food hazards may only confuse the situation further and worry patients and doctors more, nevertheless proved reactions must be made known. What is wrong, I believe, is that many published statements on interactions are based on individual reports which represent associations rather than true reactions and to which a causal role cannot always be definitely assigned, and it is these that needlessly increase the uncertainty over MAOI pre-