for great feasts but did not breed in sufficient numbers to be eaten frequently. Fish were the major protein source and were plentiful. Birds and sometimes the native rat were snared to make a useful addition to the diet.

From these sources the Maori diet was adequate, probably just adequate, in protein; but there was no generous source of carbohydrates. The climate is too cold for coconut palms. Kumara, the Polynesian sweet potato, grew only in the northern half of North Island and is not a prolific vegetable. The staple item in the diet—as is stressed by all the eighteenth-century European visitors, both English and French—was fern root, the rhizome of the common bracken fern. When dug up, baked, and pounded, this could be chewed to yield some starch, a meagre result from much hard work. Thus the Maori remained lean and his genetic hyperuricaemia was controlled.

The white visitors and early settlers did what they thought was a kindness. They gave the Maori a better and easier food supply. Potatoes, wheat, and sugar were the downfall of the Maori race. With copious sources of carbohydrate, the Maoris got fat and with obesity came diabetes, gout, and cardiovascular disease. The worst results came from good intentions. I have not mentioned alcohol because it entered the picture only at a later stage; the Maori was slow to develop a liking for alcohol. Beer may make a significant contribution to Maori obesity today, but that was not so in the early days.

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Pressure on the tracheal mucosa from cuffed tubes

SIR,—The study by Drs J M Leigh and J P Maynard (5 May, p 1173) is of considerable help in the difficult choice of a tube for prolonged tracheal intubation. However, we would like to inject a note of caution into the use of low-pressure cuffed tubes in spontaneously breathing patients.

A recent patient in our intensive therapy unit died as a result of massive aspiration of gastric contents past the properly inflated, low-pressure cuff of an endotracheal tube. The patient was breathing spontaneously in the sitting position while being weaned from mechanical ventilation. Despite intensive resuscitation, cyanosis became intense and death rapidly ensued. Necropsy confirmed extensive pulmonary aspiration and did not demonstrate any abnormality of oesophagus or trachea.

If the pharynx fills with fluid, with the patient sitting up, a hydrostatic pressure of 10–12 mm Hg may be exerted from above on the cuff of the endotracheal tube. Preliminary laboratory studies on the low-pressure cuffed tubes used in our unit confirm that, with a cuff pressure of 15 mm Hg, there is a leak of fluid past the cuff along folds in its wall. The effect is accentuated by a negative pressure below the cuff, such as may occur during spontaneous ventilation. If a patient were to take a deep inspiration, as after a coughing fit, or if the lumen of the tube were partially obstructed, greater negative pressures may be generated and the effect further exaggerated.

We hope to pursue our study of this phenomenon, and offer this report not as an argument against the use of "floppy" cuffed

tubes but simply to warn against too great a reliance on the protection against aspiration offered by such tubes.

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Driving after anaesthetics

SIR,—Recently Dr T W Ogg (31 March, p 891) drew attention to the fact that no published work seems to exist on the question of when it is safe to drive after general anaesthesia.

We have been investigating this problem for some time in relation to the administration of nitrous oxide in dental surgeries as an analgesic and sedative agent (relative analgesia or inhalation sedation). With the help of dental student volunteers we have tested driving ability following 15 minutes' inhalation of air, 50% N₂O/O₂, and 70% N₂O/O₂ mixtures, using a driving simulator and a film based on the British Department of Transport driving test. A slight but quantified impairment in driving ability was found up to 30 minutes following inhalation of the N₂O/O₂ mixtures. Under our experimental conditions it would appear that caution in driving should be exercised after a short exposure to nitrous oxide. Full details of the experiment have been submitted for publication to the *South African Medical Journal*.

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Another view of the Kalash

SIR,—We were interested to read Dr Alison Leach's account in Personal View (10 March, p 679) of her experiences with the Kalash tribe of the North-west Frontier. As we spent over two months living with these people a short while ago we thought that we ought to bring a few points to her attention.

Firstly, the suggestion that these people are descendants of Alexander the Great is at best a myth and something quoted by the Government guide books rather than by the people themselves, though we admit that one does occasionally see the unusual sight of a blue-eyed Pakistani in these parts.

We were slightly perplexed about where she discovered the names of the Kalash villages that she visited (Rumbhur, Bumboret, and Birir, for example) as these are not villages but the names of the three valleys in which these people can be found. In each of them are upwards of five small hamlets stretched over at least 10 miles of rugged, mountainous countryside.

Delighted we were when we read her observation that infected skin lesions were so common, but it would be worth pointing out that this is almost certainly due to the people's tradition that they should never wash except on the rare occasions that custom permits it.

From our point of view iodine-deficient goitre was the most prevalent condition, affecting some 65% of women and 35% of men. The area shows one of the highest levels of endemic goitre in the world and has been extensively studied in the past.

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Dalziel's disease

SIR,—The correct spelling of Sir Kennedy's surname is Dalziel¹; he was born at Penpont near Dumfries in 1881 (31 March, p 876). Several senior colleagues have attempted to identify the pathologists who were at the Western Infirmary, Glasgow, 66 years ago. Almost certainly all the reports were scrutinised by Sir Robert Muir. However, in the first edition of his *Textbook of Pathology*² Muir made no reference to the pioneering work on chronic interstitial enteritis which Sir Kennedy Dalziel presented in Glasgow and Brighton in the spring³ and summer of 1913.

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¹ Dalziel, T K, *British Medical Journal*, 1913, **11**, 1068.

² Muir, R, *Textbook of Pathology*. London, Arnold, 1925.

³ Dalziel, T K, *Glasgow Medical Journal*, 1914, **82**, 346.

"The Edinburgh School of Surgery after Lister"

SIR,—I read the *BMJ* of 28 April with particular pleasure—firstly, on account of Dr Dale Falconer's fascinating article "Best-dressed casualties" (p 1130) and, secondly, for Professor Hugh Dudley's generous review of my book *The Edinburgh School of Surgery after Lister* (p 1138). I accept his criticism that there is no index. An index was discussed but I felt, as there was very little overlap of subject matter, that the headings of the chapters in the contents list were a sufficient guide. However, I was wrong.

As regards references to source material, a fair copy of all this voluminous material is being prepared. This will be available in the library of the Royal College of Surgeons of Edinburgh for anyone interested, possibly someone in the future taking Professor Dudley's hint and writing a modern history of the college that is long overdue.

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Disinfection with glutaraldehyde

SIR,—Your correspondents Dr G A J Ayliffe and others (14 April, p 1019) suggest that the products which have become available since the expiry of the patent on the original 2% activated alkaline glutaraldehyde solution are likely to be corrosive to certain metals and to damage other materials.

We have recently completed laboratory investigations on the effects of six aqueous 2% glutaraldehyde preparations on 25 different metals, combinations of metals, and other