rational and in keeping with the principles of the S.I. system.

Whatever decisions are taken by the international bodies concerned, they must find willing acceptance by national professional bodies and, even more important, by the individual physicians who will be directly affected in practice. In some countries haemoglobinometry is performed by clinical chemists in some laboratories and by haematologists in others. The confusion which could follow if different conventions are adopted by the two disciplines is disturbing, and its possibility points to the need for universal agreement on whatever convention is adopted. Any change should be co-ordinated among the different specialties and by all laboratories in each country.

Whatever changes are made will be far-reaching, requiring recalibration of apparatus and new report forms as well as making it necessary for doctors and laboratory technicians to become conversant with an entirely new set of values to replace those with which they are familiar. Such changes should not be undertaken lightly. For this reason the International Committee for Standardization in Hematology is sponsoring a series of discussions at international congresses during the next few months[6] to ensure that haematologists become conversant with the proposals, and have ample opportunity to be involved with the decisions for change, if indeed change there must be.

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Supersonic Radiation Risks

Concorde in all its aspects is a recurring theme in public discussion. Its possible effects on the economy, on the environment, and on health are all debated. Among the main problems deserving study are those of noise and radiation.

As we go higher so the shield presented by the atmosphere against galactic and solar radiation decreases. At sea level we have the equivalent of 3 ft (90 cm) of lead roof over our heads. At the altitudes where subsonic airliners fly, 37,000-40,000 ft (11,000-12,000 m), it is equivalent to 7 in (18 cm) of lead, and at supersonic altitudes, 56,000-60,000 ft (17,000-18,000 m), about 2½ in of lead. The steady-state radiation burden of free space is about 17 mrems per day,[1 2] and reviews[3-5] have indicated that about 0·6-1 mrem per hour is a representative dose for passengers at 58,000 ft (17,500 m) and fairly high latitudes. F. J. Ensell[6] has already reported that these estimates are in fact being confirmed. These doses must be considered in comparison with a background dose of 120 mrems per year in London, about 300 mrems in Aberdeen, and 2,000 mrems in Kerala State in India, as well as other sources of radiation in our modern life. A person very close to a colour television set is subjected to 0·5 mrems per hour. A mass miniature radiography chest *x*-ray examination on an old set may give 10 mrems, and other medical procedures make considerable additions to our personal totals of radiation.

For the average passenger, therefore, a three-hour trip in a Concorde seems relatively harmless, but the snag is that solar flares do occur, though relatively rarely.[7] During a flare the radiation dose at a cruising level of about 56,000 ft (17,000 m) rapidly increases. For instance, a flare in 1956 gave a calculated dose rate of about 2 rads per hour at 60,000 ft (18,000 m).[8 9]

Adequate warning must therefore be available to the aircrew in the event of a solar flare.[10] Ground-based warnings will not be good enough because of rapid deterioration in telecommunications and therefore the aircraft itself must carry detector equipment. If the detector is unserviceable, the aircraft will not be allowed to operate at altitudes for supersonic cruising. Such equipment[11] is fitted to the Concordes. Ensell[6] has indicated that it is returning values close to predicted postulates. If a warning of high-dose radiation becomes operative, the Concorde can descend rapidly to a safe altitude without inconveniencing the passengers.

Provided the detector is operative, the captain takes note of it, and can descend, the risk to patients from radiation is negligible, and doctors can reassure inquirers. Moreover, the chance of a solar flare occurring during an individual journey is statistically very low.

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Zoster and Hodgkin's Disease

Herpes-zoster-varicella infection is commoner in patients with malignant disease than in the general population. The increase in incidence is particularly great in patients with Hodgkin's disease.[1-3] Recurrent exacerbations may occur and the infections may become disseminated and cause death.

In a series of 592 patients with Hodgkin's disease at Stanford Medical Centre 91 (15·4%) had zoster infections at some time during the course of their diseases.[4] An even higher incidence (25%) was reported over a 24-month period in 102 patients with Hodgkin's disease attending the Baltimore Cancer Research Centre.[5] The incidence of this infection among patients in both centres with lymphomas other than Hodgkin's disease was less (7·1 and 8·7%). The infection is not so common in patients with other forms of malignant disease, including solid tumours and acute leukaemia, though it appears to be rather commoner than in the general population. Impairment of the patient's resistance by other disease, splenectomy, radiotherapy, and chemotherapy all predispose to infection. The defect in cellular immunity characteristic of Hodgkin's disease is thought to predispose especially to the development of this