sulation techniques using smaller capsules and newer chemicals will greatly facilitate comparison of data among centres. Intense interest has been aroused by the work of Sullivan *et al.*¹⁸ who showed that a biohybrid artificial pancreatic device in the form of a vascular implant containing bovine islets and implanted into pancreatectomized dogs could function for 80 days. Further improvements in the membrane technology of these devices are necessary for long-term reversal of diabetes but these landmark developments are highly encouraging, especially as these devices obviate the need for immunosuppressants.

Despite recent advances, the goal of one to one human pancreatic islet transplantation remains elusive. Even if this were to be possible, there would be an acute shortage of cadaver pancreata. Therefore, the possibility of xeno-transplantation and human fetal islet transplantation looks increasingly attractive.

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Accidental hypothermia possibly caused by antecedent heat stroke

Sir,

Accidental hypothermia in adults classically follows an exposure to cold environment, during a situation in which a person is unable to protect himself, usually due to coma, exhaustion or injury.¹ Heat stroke, an illness in which insufficient heat dissipation causes a rise of body temperature to a noxious level and leads to an altered mental status,² may theoretically precede hypothermia. In the following, we present a patient who probably had such a sequence of events during a strenuous march he performed in cold weather.

In November 1991, a young recruit, previously healthy, suddenly collapsed in the 22nd kilometre of a strenuous march, performed in the Negev desert, in cold and dry weather (ambient temperature +12°C, humidity 60% and wind velocity 15 km/hour). A night prior to the march he was on duty, and therefore unable to sleep or rest properly. Before collapsing he was confused and exhausted, but continued to walk. Two hours later he was brought to a military clinic in an open command car, covered with only one blanket. On examination he was comatose, had cool wet skin and clothing (due to profuse sweating), and his rectal temperature was 34.8°C. His physical examination was otherwise unremarkable. He was warmed up with blankets and warm intravenous saline, and transferred to a regional hospital. Laboratory studies, performed on admission to the hospital revealed elevated creatine phosphokinase (CK) 1,640 U/l (normal: 40 U/l) and transaminase (SGOT) 60 U/l (normal: 40 U/l) and normal glucose, electrolytes, creatinine, bilirubin, prothrombin, partial thromboplastin time, platelet count and electrocardiogram. The patient recovered within a few hours and was discharged the next day with a CK of 800 U/l and a diagnosis of mild accidental hypothermia.

This patient had accidental hypothermia which developed while he was confused and comatose. Although his body temperature was not recorded at the time he collapsed, the fact that he was engaged in a vigorous physical effort prior to the event, the evolution of his illness through confusion to coma and exclusion of other diagnoses, in this young and healthy soldier, raise the possibility that the hypothermia was preceded by a heat stroke.

Coma or collapse with impaired consciousness developing during prolonged strenuous exertion, in an apparently healthy individual, may be safely regarded as a consequence of heat stroke, if as in this case no other obvious cause is found.² Mild hypothermia does not alter mental status and other causes that may account for coma in this context, such as hypoglycaemia, disturbed electrolyte balance or cardiac disease were excluded by history, physical examination and laboratory results. Also, the substantially elevated muscle enzymes with CK reaching 40 times the normal value, is typical of heat stroke or strenuous effort and not of short-lived, mild hypothermia.

Several case reports^{3,4} and our own experience confirm that heat stroke may occur in cold weather. The apparent paradox of hypothermia developing shortly after hyperthermia is explained by an accelerated heat loss occurring under these circumstances. A decline in body temperature to a normal level during evacuation of heat stroke victims is common.^{5,6} Individuals who perform in the cold consider the weather as protective against heat stroke. Our experience indicates that, in cold weather, the necessary practice of work–rest cycles, proper fluid intake and initiation of the extreme physical effort at an optimal physical state are, as in this case, constantly ignored. This case illustrates that measures to prevent heat stroke in cold weather are as important as in a warm climate.

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Digital clubbing in a patient with McCune Albright syndrome

Sir,
McCune Albright syndrome is characterized by polyostotic fibrous dysplasia, cutaneous pigmentation and endocrine hyperfunction.^{1,2} Several endocrinopathies including Cushing's syndrome, hyperprolactinaemia, acromegaly and hyperthyroidism have been reported.^{3,4} Polyostotic fibrous dysplasia may cause pathological

fractures, facial asymmetry and hearing impairment.⁵ We describe a case of McCune Albright syndrome in which there was digital clubbing of fingers with radiologically abnormal bone, a finding not to our knowledge previously reported.

A 36 year old woman was admitted to hospital because of her fourth pathological leg fracture since the age of 12. At the age of five, her family noticed bowing of her right leg. Physical examination revealed facial asymmetry with prominence of the right orbit. Areas of flat, irregular cutaneous pigmentation were present over the shoulder and left buttock. We noticed painless clubbing of the second and third fingers on both hands. The results of complete blood count, urine and biochemical analysis were within normal limits except for a high level of alkaline phosphatase of the healing fracture. Detailed endocrinological investigation revealed no evidence of any associated endocrine or metabolic disorder other than early menarche. Skeletal roentgenograms showed extensive bone lesions. Hand X-rays disclosed lytic and sclerotic changes of the fingers which were remarkable in the second and third fingers of both hands (Figure 1). The phalanges were also expanded by the lesions. These fingers are characterized by clubbing. The other fingers were relatively free of disease. There was a close relation-

Figure 1 Finger clubbing (a) and bone changes (b) of second and third fingers in a patient with McCune Albright syndrome.