Hence, distributions of height and (maturational) age for gender differ considerably and adjustments by linear regression cannot alter this: comparisons remain difficult. Secular trends further complicate such analyses.^{2,3} Because the height-lung function relationship during puberty is complex and varies with age and gender,^{4,5} it is desirable to study the sexes before and after attaining adult height.

A contribution of body mass index to lung function may biologically relate to trunk size rather than fat distribution. Schwartz *et al* found correlations between body mass index and sitting height and concluded that sex related differences in lung function are partly explicable by the growth of the trunk.⁶ Indeed chest circumference and biacromial width correlate—independently of stature—with body mass index ($r=0.80$ and 0.55 , in 995 girls, R Veeneklaas, personal communication).

Explained variance is improved by body mass index but it is unclear if this holds equally for the whole age range studied, and it seems premature to infer that body mass has a positive effect on lung function in girls and in normal weight boys.

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Circulating malignant cells in Burkitt's lymphoma: possible role in tumour dissemination

SIR,—The tumour, Burkitt's lymphoma, arises as a clonal proliferation. In any individual patient the surface membrane immunoglobulin of the malignant cells has identical heavy and light chains.¹ It is usual at presentation for such patients to have multiple organ involvement. Necropsy studies have demonstrated multiple organ involvement in both African and non-African series.^{2,3} Previous explanations for the widespread metastases have been principally that the tumour cells spread through anatomical channels and tissue layers, but it was not easy to explain metastases to the breast and thyroid via such routes.³

Circulating malignant cells can be identified in 25–50% of patients with Burkitt's lymphoma who have bone marrow involvement.² By examining at least three buffy coat smears stained routinely with Leishman's dye⁴ we were able to detect malignant cells in the peripheral blood of 19 out of 25 patients in our

centre who did not have bone marrow involvement. It is essential to obtain samples before chemotherapy because of the tumour's response to cytotoxic agents. We believe that multiple organ involvement in Burkitt's lymphoma results from deposition of circulating malignant cells within tissues. Such haematogenous spread can account for tumour masses in apparently aberrant sites.

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An emotional trigger mechanism for sudden infant death

SIR,—In their study of recurrent cyanotic episodes Southall *et al* suggest that the most common trigger was a sudden, naturally occurring stimulus from fear, anger, or pain.¹ Elements of 'surprise' and 'unexpectedness' were stressed. Cyanotic episodes were more common 'when there was a high level of emotional tension in the home, or when the routine of the child was interrupted'.

These observations lend strong support to the 'fear paralysis' hypothesis proposed in 1986 as a trigger mechanism for SIDS,^{2,3} adding emotional/psychical factors to the list of theories attempting to explain the cause of sudden infant death syndrome (SIDS). This innate, atavistic reflex, present throughout the entire animal kingdom, precipitates cardiovascular and respiratory changes, which in animals may lead to death. The stimulus for the fear paralysis reflex is any threat perceived as a danger and which evokes fear, such as predator confrontation, restraint of movement (preventing flight), unfamiliar and sudden noises. The reflex is strengthened in a strange environment, in separation from the mother and companions, and in situations with which the organism is unable to cope. Elements of surprise, unexpectedness, and novelty were similarly emphasised.

On the response side, characteristic features of the fear paralysis reflex are an immediate motor 'paralysis' which includes generalised and prolonged immobility, reduced muscular tone, bradycardia, and unresponsiveness to external stimulation. The response pattern further includes strong and prolonged (20–30 second) arrest of respiration in expiration, and rises in systemic and pulmonary arterial pressure—that is, the same changes that are held responsible for the hypoxaemia in cyanotic episodes and SIDS in susceptible infants. Emotional responses as well as apnoeic episodes may show both primary increases and decreases in heart rate.

A further similarity between the fear paralysis reflex and the cyanotic episodes refers to their response to pharmacological agents. In

animal experiments, fear paralysis was suppressed by clonidine and other anxiolytic drugs,² and these were proposed as a preventive means in infants at high risk for SIDS.² Southall *et al* have now demonstrated that such treatment with clonidine and tetrabenazine is effective.

In support of the fear paralysis reflex as an extrinsic trigger mechanism for SIDS is the observation that restraint of movement was considered a contributing factor to death in as many as every third case of SIDS.⁴ Further, the excess of SIDS during weekends and holidays can only be explained by the operation of environmental trigger mechanisms.⁵ Finally, Wennergren *et al* observed marked disturbance of the infant's daily rhythm and/or sleeping rhythm before death or the apnoeic episode in about 40% of the cases.⁶

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BOOK REVIEWS

Yearbook of Pediatrics 1990. Edited by FA Oski, JA Stockman III. (Pp 527; price not stated, hardback.) Yearbook Medical Publishers, 1990. ISBN 0-8151-6585-4.

This is the eleventh time that Professors Oski and Stockman have collaborated in the editing of the yearbook. Neither shows any sign of flagging and the commentaries are as lively and as entertaining as ever. The format is similar to previous editions except for the deletion of the synopsis of review articles. Key publications have been abstracted from a wide range of journals of English speaking nationalities.

In his foreword Professor Oski describes, with examples, the scope of the contents, how society and its problems touch on paediatrics (AIDS, maternal drug abuse, war, contraception), new diseases (human parvovirus and pestivirus infections), new therapies (heart-lung transplantation for cystic fibrosis, laser treatment for naevi) and new signs (the closed eye sign in abdominal pain, the perineal eruption in Kawasaki disease). For general