

## Letters to the Editor

*Height, Cancer, Longevity, Centenarians*

### **We are too tall**

Madam

One of the general ideas that sustains biological scientists is that it is better to be tall than to be short. However, most relevant evidence shows that this idea is wrong<sup>(1)</sup>. It was also challenged recently in an authoritative report showing that being tall increases the risk of colorectal and post-menopausal breast cancers and (probably) pancreatic, pre-menopausal breast and ovarian cancers<sup>(2)</sup>. Your Out of the Box columnist has commented on the issue of height and health<sup>(3)</sup>. This letter reports some new findings.

Within generally healthy environments, shorter people live longer<sup>(4)</sup>. Six relatively short populations, those of Andorra, Macao, Japan, San Marino, Singapore and Hong Kong, are at the top of the life expectancy charts. Another study, based on 1.3 million 21–30-year-old men tracked for 70 years, shows that shorter men live longer<sup>(5)</sup>. Many other studies support these findings<sup>(1,4)</sup>.

Okinawans have the world's highest percentage of centenarians. Centenarian men average 1.48 m and women 1.39 m<sup>(1,4)</sup>. A new study in Sardinia has found longevity is greater for short men<sup>(6)</sup>. The percentage of centenarians in Italy increases with decreasing height from mainland Italy, to Sardinia, to Nuoro (a province in Sardinia).

Biological factors support epidemiological findings. For example, longevity is related to the replicative capacity of cells, and shorter elderly people have a higher remaining replicative capacity than taller elderly people<sup>(7)</sup>. It also takes more cells to build and maintain a bigger body, and more cells increase the risk of cancer in taller people<sup>(4)</sup>.

We are all accustomed to the fact that women live longer than men. Why? I suggest one reason is clear. Women are shorter than men.

Let us hope that the scientific community thinks again about the implications of increasing height, before genetic engineers are set loose on further increasing the heights of future generations.

Thomas T. Samaras  
Reventropy Associates, San Diego, CA, USA  
Email: SamarasTT@aol.com  
doi:10.1017/S1368980008004722

### *References*

1. Samaras TT (editor) (2007) *Human Body Size and the Laws of Scaling. Physiological, Performance, Growth, Longevity and Ecological Ramifications*. New York: Nova Science.
2. World Cancer Research Fund/American Institute for Cancer Research (2007) *Food, Nutrition, Physical Activity and the Prevention of Cancer: A Global Perspective*. Washington, DC: AICR.

3. Cannon G (2007) The trouble with height (Out of the Box). *Public Health Nutr* **10**, 1210–1213.
4. Samaras TT (2009) Should we be concerned over increasing body height and weight? *Exp Gerontol* **44**, 83–92.
5. Holzenberger M, Martín-Crespo RM, Vicent D & Ruiz-Torres A (1991) Decelerated growth and longevity in men. *Arch Gerontol Geriatr* **13**, 89–101.
6. Salaris L, Poulain M, Piras I, Ghiani M, Inghes S, Vona G, Calò C (2006) Height and longevity among males born in Villagrande Strisaili (1866–1915). In *Proceedings of the Conference XLII Riunione Scientifica della SIS*, Torino, Italy, 14–16 June, pp. 649–652. [http://www.sis\\_statistica.it/files/pdf/atti/Spontanee%202006](http://www.sis_statistica.it/files/pdf/atti/Spontanee%202006) (accessed January 2009).
7. Maier AB, van Heemst D & Westendorp RG (2008) Relation between body height and replicative capacity of human fibroblasts in nonagenarians. *J Gerontol A Biol Sci Med Sci* **63**, 43–45.

*Leaf concentrate. Undernutrition*

### **Nourishing child and adult patients in Congolese hospitals**

Madam

In support of the letter you have published from Glyn Davys<sup>(1)</sup> following that from Professor John Waterlow<sup>(2)</sup>, I wish to testify as follows. I am Surgeon to the Diocesan Health Service in Bukavu, in which capacity I have clinical experience of the use of leaf concentrate in many sorts of situation.

For four years the Service studied the effects of leaf concentrate made from lucerne, which was distributed widely in seven hospitals, three referral health centres and a dozen health clinics in South Kivu, where childhood malnutrition is particularly high due to war, pillage and the whole assortment of accompanying miseries.

Initially kept for infants with kwashiorkor and marasmus, leaf concentrate was then also given to pregnant women who though more or less well-nourished were anaemic, and especially to those who, having given birth, presented with absence of breastmilk or difficulty in providing it. We went on to give leaf concentrate to patients in a poor general state because of chronic infections of many kinds; and we used it post-operatively, and also for malnourished diabetics and for debilitated convalescents. The doses were 5–6 g/d for children and 10–12 g/d for adults.

Results were very rapid, spectacular even. There was no intolerance or allergic reaction recorded and consumption of the concentrate was readily accepted by all. We noted:

- Curing in a week or two of asthenia and apathy.
- Rapid recovery of appetite and improvement in general condition.
- Regain of weight, even able to catch up in 4–6 weeks.