RE: “VITAMIN C DEFICIENCY IN A POPULATION OF YOUNG CANADIAN ADULTS”

In their report that nearly 50% of healthy young Canadian adults have subnormal serum vitamin C concentrations, Cahill et al. (1) cite our observation that 60% of the acute-care patients in a tertiary care Montreal hospital had subnormal plasma vitamin C concentrations (2). More pertinently, we also observed that only 13% of people concurrently attending the hospital’s outpatient test center had a subnormal plasma vitamin C concentration (2). The method used by Cahill et al. (1) for handling, storing, and analyzing serum vitamin C is questionable. To prevent vitamin C degradation, whole blood samples must be kept cold at all times, and as soon as the plasma is obtained it must immediately be stabilized by ice-cold deproteinization or flash frozen with ethanol-dry ice with prompt storage at −70°C to −80°C (3, 4). If not stored at −70°C to −80°C, vitamin C will disappear even from deproteinized plasma samples. The serum samples in the reported study were neither deproteinized nor flash frozen prior to storage, and they were stored at only −20°C. The high performance liquid chromatography detection method is not identified or described, precluding an assessment of its reliability.

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REFERENCES

L. John Hoffer (e-mail: l.hoffer@mcgill.ca)
Lady Davis Institute for Medical Research, McGill University and Jewish General Hospital, Montreal, Quebec H3T 1E2, Canada

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