New System for Quantitizing and Recording Exercise

To the Editor:

The recent article and editorial concerning marathon runners and coronary artery disease in the New England Journal of Medicine has put to rest the myth that the ability to run a marathon is protective for coronary disease. To establish the role of running and exercise in coronary artery disease, a better way to quantitate exercise will be required. How can such information be quantitated, recorded and communicated? The method should be simple, easy to calculate and easy to communicate. I would like to propose such a system: mile/years.

Medicne has known the effects of tobacco usage on lung disease and the concept of pack/years has been a useful and effective tool to communicate and quantitate tobacco usage. The use of a similar concept—mile/years—would be equally applicable to quantitate running history.

A mile/year is defined as running an average of one mile per day for one year. A runner who ran an average of two miles a day for ten years would have a history of 20 mile/years. Furthermore, it would be of value to note the duration of the running efforts. A simple statement of the total number of years as a runner can be added to quantitate the duration of the efforts. For example, our runner above would have a history of 20 mile/years over ten years. Another runner who more recently took up the avocation and averaged five miles per day for the past three years would have a history of 15 mile/years over three years. Such a notation may be of significance since it cannot escape notice that both of the marathon runners in the report who died of coronary artery disease had relatively recently converted to the sport.

Certainly, no measuring stick can be perfect and this one is not. For example, if the data (mile/years over years) were collected inappropriately, then errors would ensue. When gathered during a cocktail party, the history would undoubtedly be tainted with one mile/year histories frequently turning into three or four mile/year histories. On the other hand, if collected from runners just before a competitive run in the company of the other contestants, then a 300 mile/year history may be reported as a 50 mile/year history. No doubt one must be careful. Certainly, when questioning about cigarette smoking history for clinical information similar difficulties are ever-present, but they have not impaired the usefulness of the concept.

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Determination of Bronchodilatation

To the Editor:

The recent article by Ramsdell and Tisi1 entitled “Determination of Bronchodilatation in the Clinical Pulmonary Function Laboratory; Role of Changes in Static Lung Volumes” deserves some skepticism. The contention of this article is that in many patients who show a beneficial response to bronchodilator drugs, this response is not evident on forced expiratory flow and can only be determined by lung volume measurement in a body box. In fact, the measures of forced expiratory flow used by the authors included only the FEF_{25-75} and the FEV_{1}/FVC. The data show that the latter ratio did not change, but that both FEV_{1} and FVC improved in absolute terms. Light et al2 have pointed out that changes in the absolute value of FEV_{1} may be the best test to assess bronchodilator function. In the group with supposed “isolated volume response,” there was a significantly (p < 0.001) increased FEV_{1}. How can the authors contend that there was no improvement on forced expiratory flow in this group when the best test of bronchodilatation was improved?

The paper is therefore misleading. What proportion of “isolated volume responders” had no change in the FEV_{1}, FEV_{1}/FVC, or FEF_{25-75}, but did have improvement in lung volume as measured by body box? This would be the group that most of us would entitle isolated volume responders and would certainly be less than 40 percent of all people who responded to bronchodilator drugs.

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Toxic Effects of Ethambutol

To the Editor:

Addington,1 in his review of antituberculosis drugs, indicated that “the only important toxic effects of ethambutol is retrobulbar neuritis.” Recently Nair et al2 reported a case of a woman who showed evidence of both optic neuritis and peripheral neuropathy while receiving ethambutol. Although peripheral neuropathy is a rare side effect, it is mentioned in...