

410 Grovekand Avenue No.802 Minneapolis MN 55403 27 June 1990

Prof. E. M. Buskirk Laboratory of Human Performance Research 118 Noll Lab University of Pennsylvania Univ. Park, PA 16802



Dear Buz,

Art Leon gave me a tape of your address at the annual meeting of the American College of Sports Medicine. Margaret and I have twice listened to it with fascination to your history of the Laboratory of Physiological Hygiene. You reminded me of many things forgotten and some things I never knew. I marvel at your collection of anecdotes from colleagues and old friends. It must have taken a lot of time and digging to get the material. I admire the way you put it all together. I would like to have a copy of what you said; it tells the story even without the pictures you had on slides.

I am glad you talked much about Henry Taylor, your mentor and my most cherished colleague. A little correction may be made. Henry never did any research at Harvard. When I came from Cambridge where I was teaching physiology I was assigned to be the advisor of Henry and five other senior students in weekly sessions. Henry went on to Harvard Medical School and after three years at Harvard I moved to the Mayo Clinic to get twice my salary at Harvard. After a year I accepted the offer of the University of Minnesota because I missed the atmosphere of academic science at Mayo. By then Henry was disabled by tuberculosis and went home to Minnesota to recuperate.

When Henry came to see me I said that before going back to medical school he could come into my small group for a rest and a taste of research. So he got the bug and stayed on here for life. You know most of the rest of his story. When I was starting in Europe what eventually was named the Seven Countries Study Henry got the idea of the same kind of a prospective study closer to home and was able to persuade the heads of the railroads to cooperate. In practice he tried to do too much. His application to USPHS for a grant to continue was rejected because his report for the first ten years showed limitations. However, the Railroad Retirement Board agreed to give us death notices of the men in the study for another five years.

Parenthetically, three years ago I was able to get money to pay the Board to bring the mortality records up to date for a 25-year follow-up. We have just completed editing those records and I hope within a week or so to start the statistical analysis of the entry characteristics of the men who died and those alive within 25 years. Among 2,571 men only 23 remain unaccounted for. I keep regretting that

Henry is not here to see the finale.

You know so much about members of the staff of the Laboratory and visiting workers that you may be interested to learn more. In 1952 I had free time from my position of visiting professor at Oxford. I made surveys, Margaret helping, of serum cholesterol, the diet and coronary heart disease in Naples and Madrid. Flaminio Fidanza helped in Nap; es, Paco Grande in Madrid. Paco's help was invaluable and he was going no place in Madrid; he was denied his proper position because of politics. Yoshka Brozek could not get a decent job after getting his doctor's degree. Knowing the situation of Paco and Yoshka I was happy in 1953 to be able to offer them modest places with me. They met for the first time in 1954 on the way to join my staff.

There are a few points in your account of my doings that should be corrected. Krogh had nothing to do with the high altitude expedition and Barcroft's contribution was simply in making it possible for Bryan Matthews to go along. Years later he became Sir Bryan. L.J. Henderson made it possible to get money but never talked about what we should do and how to do it. He was always stretched out on the couch in his office whenever I saw him; he disliked all exercise.

For the high altitude job we wanted to go to the Pamir mountains for which permission was needed from India, not from Russia. With no permission we went to the Andes and the Mount Aucanquilcha on the border of Chile and Bolivia. At 5,000 meters on the mountain there is a copper mine and from there Bryan and I climbed to the top with some miners (Indians) guiding. A few meters below the summit Bryan and I dug a hole in the snow, covered it with blankets to make our refuge. In sunlight the temerature was 40 to 60 F; in the night it fell to 40 or 50 below zero.

Bryan and I stayed there a week, slowly walking around the mountain top making observations on ourselves. Local Indians brought John Talbot up to take my arterial blood. He got the blood sample but quickly became desperately ill from mountain sickness and had to be carried down by the Indians.

About exercise, I trust you have seen the fine article in the British Heart Journal. June 1990, by my old friend Jerry Morris. Alas! I can no longer indulge in vigorous exercise after two attacks of TIA with pneumonia requiring chest surgery in between. I think back to the Fourth of July when I was at the Mayo Clinic. It was 100 F. and I swam the length of Lake Zumbro, almost ten miles, with a young secretary as a companion, others along in a rowboat. A dull way to spend five hours!

In our Seven Countries Study we have records on occupational activity but none on aerobic exercise which

we used to call anaerobic. Classifying the men in work activity the 25-year survival was significantly related, positively, to that kind of activity in the first five cohorts analyzed to date. You will see that, and a great deal more, in the paper now in press in the Journal of Epidemiology and Community Health with authors A Menotti, A Keys, D Kromhout et al. But we would never claim cause-and-effect.

In regard to the K ration I don't know what Van Slyke had to do with enlisting me to design and test a ration for paratroopers. All I know is that, after some correspondence about designing a ration for paratroopers, the Quartermaster sent Colonel Rohland Isker to Minneapolis and between us we rigged up a ration and tested it with a platoon of soldiers at Fort Snelling. When the Chief of Infantry saw us testing it in Georgia he decided it should be the emergency ration for all infantry, not only paratroopers. The ration was greatly misused because it was so easy to store and ship. Some troops lived on it for weeks in the south Pacific. I wanted to be an officer in the Army but the highest rank they offered was as a major and everyone said I should stay on as a Special Assistant to the Secretary of War where I could talk down to the generals.

We are here in Minneapolis until September when we plan to return to "Minnelea", our home in southern Italy. Martti Karonen, former Surgeon General of Finland, lives next door, Flaminio Fidanza's villa is next door on the other side. Jerry Stamler's villa is below at 30 meters above the Mediterranean; our villa is at 70 meters. Currently I am just finishing, after two years, my ms "Longevity and Body Fatness in Middle Age". I work most of the day on my computer doing statistical analyses, writing mss, and letters like this one to you. I'll never finish the analyses of the data from the Seven Countries Study -- 25 years follow-up on over 12,000 men with hundreds of variables. Margaret checks my mistakes she sees on the console,

I am happy to know about your accomplishments and honors; may you long continue!

Ever yours,

Ancel Keys