

TYÖTERVEYSLAITOS

INSTITUTE OF OCCUPATIONAL HEALTH - L'INSTITUT DE MÉDECINE DU TRAVAIL - INSTITUT FÜR ARBEITSMEDIZIN

HAARTMANINKATU 1 — HELSINKI — FINLAND

DIR. PROF. LEO NORO, M.D.

July 15, 1964

Dr. Henry Blackburn
Laboratory of Physiological Hygiene
Stadium, Gate 27
University of Minnesota
Minneapolis 14, Minn.
USA

Dear Henry:

Thank you very much for your wonderful recording of the traditional jazz. I will have it on tape at Ilomantsi. I got yesterday your letter of July 8, thank you.

I have, in fact, been writing a letter to you for a couple of weeks. I have a lot of questions, and every day more and more. As you perhaps know, I have some responsibility to arrange our study this fall. Martti is on vacation and will be back on August 5.

Some information and questions:

1. I agree with you that comparisons in history and clinical examination should be based on the individual items or their combinations. "Diagnostic impression" is not as such a poor characteristic, in many cases it is perhaps better than any individual item or their combination. But I feel that the variation in "diagnostic impression", perhaps systematic error, is much bigger than in individual items. I prefer to send you the microfilmed editions of our forms. I would like to know something about your reading machine. What reduction rate is good, do you prefer 35 mm film or 16 mm film? We can do microfilming in five days, but it costs about \$ 400. Where could we find this money? It seems that we in Finland are seriously running short of money because of the expenses of our study this fall.

It is possible, of course, to send the original forms to Minneapolis. But the transportation of the forms will take more than a month, coding of microfilmed forms is easier than that of the original forms. So I prefer microfilmed editions if we could find money for that purpose.

2. The exercise tests. Of course, all subjects should have our traditional single step test as we had in 1959. We just would like to add the bicycle exercise test to the program, if possible. This department has used Åstrand's bicycle exercise test for some years, with few technical modifications. As you know heart rate only is recorded in the original Åstrand's exercise test. The heart rate is recorded in the original Åstrand's exercise test. The heart rate is recorded in the original Åstrand's exercise test.

same time we take ECG's during and after the exercise. Physical training has a remarkable effect on the results, and therefore the test seems to be valuable in the estimation of habitual physical activity. On the other hand, Dr. Hernberg and Karvonen have found a clear negative correlation between serum cholesterol and oxygen consumption estimated by this test, and I think the correlation might be biologically meaningful. Perhaps this is the main reason why we would like to add the bicycle exercise test to our program.

You will help me a lot by testing which is the shortest time period needed between the preceding single step test and the bicycle exercise test. According to Åstrand all heavy exercise is forbidden for few hours before the test. My impression, based on nothing, is that perhaps one hour would be enough. If you will find in your studies that the interval have to be 2 hrs or more, we cannot use the bicycle exercise test. Or, perhaps we could divide the subjects randomly into two groups, one having the single step test and the second one the bicycle test. By random sampling we would not loose very much information. Although the bicycle exercise test might be better, we have to use in this study, so much as possible, the same methods we used in the initial study, among them the traditional single step test. But perhaps the random sampling is not so foolish idea.

In the field study a single load only will be used. The load for male subjects aged 44-63 is 900 kilobong meters per min., for young student boys with some physical activity 1200. In our system "speed" is 50 cycles per min. The exercise lasts for 6 (or at least 4) min. and the heart rate is followed for 5 min. after the exercise. Heart rate is recorded before the exercise, and at the end of each minute during the exercise and the recovery period. ECG's are, by the way, technically reasonable good. I hope you could use in the study subjects of "our age", from 44 to 63.

In the bicycle exercise test we should have a telemetric system with small tape recorder, first of all to record the heart rate, and ECG too, if you consider it important. Our telemetric system is not suitable for this type of recording, and our two Elemas are needed in ordinary ECG's. I hope you could find machines needed and have them in our study during those two months.

3. Who will pay the expenses of "computer"-ECG's, transportation, tapes, etc. If all or part of expenses will be paid from our funds, please let me know how much.

4. I have a list of over 10 foreign persons who are going to work with us. Well, I suppose most of them are tourists. In any case, I have not got any information about how long they will work with us. You understand that we should have the same team in the East and the West, so much as possible. If you know more about these foreign fellows (how long?, what they are going to do?), please let me know. Please do not forget yourself and Pentti.

5. I am afraid that Ilomantsi will be crowded by tourists during the first week of our study. Please let me know the dates Ancel, Henry Taylor, or perhaps some other friends from Keys' Lab. will be at Ilomantsi. I try to arrange them some place to sleep.

Just now, this is quite enough for me. In few days more. The forms arrived.

Best regards to Nelly and my friends in the Lab. 1964

Dr. Henry Blackburn
Laboratory of Physiological Hygiene
Stadium, Gate 27
University of Minnesota
Minneapolis 14, Minn.
USA

Regards,



E. Orma, M.D.

P.S. I have understood that you will travel a lot in Europa in August. Please let me know your addresses, if I have to contact you in some emergency matter.

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