

UNIVERSITY OF WASHINGTON
SEATTLE 5, WASHINGTON

Dec 26, 1962

Dear Dr. Taylor

I hope the Taylor family enjoyed a pleasant X-mas holiday. We missed the lab festivities this year - after all, what is X-mas without Santa Claus Taylor!?

In a few days you should receive the last of my papers. I hated to drag^{out} this final paper so long but it is a long paper and I had to grab the time to rewrite it several times. I feel it is now in its most "sanforized" form[#]. I hope it will "wash". I had difficulty in deciding whether to include the section on prediction from RQ vs Voz. I finally decided it really belongs. I hope you agree. Please note that I particularly specified that prediction from RQ was made from available data - i.e. no experiments were specifically set up to study this, thus excusing what would otherwise be rather sloppy design.

I am having a copy of this final paper made here in case it's lost in the mail. This may delay its sending a few days.

I am scheduled to present a paper to the Northwest Med. Soc on Jan 12th - entitled "Effects of Ambient Temp. on Circul. Adapt. to Exer". I wish to present essentially what is in

June 5, 1964

Dr. Loring Rowell
Department of Medicine
University of Washington
Seattle, Washington

Dear Larry:

In the particular example of the electrocardiographic exercist test, I am inclined to think that VO_2 in cc/kg may not be a good measure of an equivalent physiological stress. I suppose that what is really wanted here is a work task that is adjusted so that the cardiac work per kg of heart muscle is uniform from one individual to another.

For example, Landowne (Chapter 15 - "Work and the Heart" edited by Rosenbaum and Belknap) using data from the literature showed that

The stroke work index (gm m. / beat/m^2) = $100 \text{ O}_2^{0.41}$

Obviously this is not a rectilinear relationship and cardiac work per unit time will be related in a rather complex way to the pulse rate at any given O_2 consumption.

I rather suspect that working out the relationship between the myocardial oxygen consumption and the rate of work or the total oxygen consumption is going to be difficult.

I suggest that you might put in a statement to the effect that although the VO_2 cc/kg will relate the total oxygen consumption to the cardiac output per kilo of heart weight as 1st approximation, The exact relationship of VO_2 cc/kg to cardiac work during exercise is not well understood.

I am enclosing some comments by H. Blackburn. In addition Dr. Simonson had some changes in wording and I will send you the manuscript with these included in a day or two.

All the best,

HLT:ab
cc:Dr. Henry Blackburn
Dr. E. Simonson
Dr. A. Keys

Henry L. Taylor

UNIVERSITY OF WASHINGTON
SEATTLE 5, WASHINGTON

March 17, 1964

Dr. Henry L. Taylor
Laboratory of Physiological Hygiene
University of Minnesota
Minneapolis 14, Minnesota

Dear Henry:

I have received word from J.A.P. regarding one of our papers. I have enclosed the editor's comments. Also, I have enclosed the comments of the J.C.I. editors regarding the EHBF paper in that I felt you might find them of interest and wish to add something to them. I am clearly in difficulty on page 20, and I now recognize the problem and will change it accordingly. Also, the use of the word "signal" on that page was clearly a mistake, although I meant it in a different sense, i.e. not as stimulus. (JCI accepted the paper)

My difficulties with J.A.P. have taught me something about attempting to publish a batch of papers out of context. I would like to humbly suggest that you expand the cardiac output paper to include the SVC, FV data where it can now fit into proper context (related to calculated total AVO_2 difference) and more important that the blood pressure, TPR work also be included. These observations were all part of this study and aid in the interpretation of several provocative results. I hope this is not unfair to Gunnar, but I am sure that after three years, he would feel that this material should be presented--and presented where it can be best interpreted.

We have just completed a series on 6 subjects at 75°F and are now measuring Δ EHBF and skin and rectal temperatures (thermocouple) at 120°F (RH 15%). It is too early to say much, but it looks good. No cardiac outputs yet, though, as I am still after a densitometer which changes neither gain nor loses linearity with increasing background dye. It's a tough problem.

I trust you have located the heights and/or surface data for our subjects. Group N data are in the thesis. Athletes are on those big tabulation sheets.

I shall definitely take your good advice and remain far away from the design committee for this CV disease control study.

You'll be happy to hear that my change in status received unanimous approval from the advancements and promotions committee and the executive committee. I know from Bob Bruce that you had a hand in this, and I want you to know that I am grateful.

There are several things I would like to discuss with you and with Yang. I shall be in Chicago April 12th - 17th for the Federation Meetings. Will you be at the meetings and/or in Minneapolis the weekend of April 18-19th?

I would like to stop off in Minneapolis on the return from Chicago.

Please let me know if I can be of help on this cardiac output paper.

Warmest personal regards,

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Larry".

Loring B. Rowell, Ph.D.
Division of Cardiology

Enclosures

LBR:es