

ADDRESS ALL REPLIES  
TO THE COMMANDANT

ATTN: SAMINT

UNITED STATES AIR FORCE  
AIR UNIVERSITY  
HEADQUARTERS  
USAF SCHOOL OF AVIATION MEDICINE  
RANDOLPH AIR FORCE BASE  
RANDOLPH FIELD, TEXAS

6 DEC 1954

Dr. Alberto Hurtado  
A partado 1116  
Lima, Peru

Dear Dr. Hurtado:

We are all looking forward to the arrival of Dr. Velasquez. We expect him early next week and will certainly try to show him what is going on here at the School.

We have been quite busy getting some of our data together from our delightful experience with you in Peru. I have been reviewing the work on extra-cellular fluid and total body water. In an inclosing a summary on four patients and in this summary you will note I have calculated total body fat and this seems to be quite high in these people. I feel this is due to an error in our total body water determinations. I might add that the total body water was calculated from the formula in the paper by Ancel Keyes, page 270, volume 33, of the Physiological Reviews, 1953. This formula reads as follows:

Body fat =  $1.563 A - 0.563 E$   
A = total body water  
E = extra-cellular fluid

In view of these findings which are not compatible with our clinical observations and thinking, I feel that it would be extremely worth while to start a completely new series of studies, both in Lima and Morococha, to establish controls with the methods being used. Probably we should use Sucrose and Anti-pyrene, and hope the Beckmann is working properly. I hope Dr. Picon will understand about this data. I just feel that in view of so many problems with the Anti-pyrene method, we should begin anew, if the Beckmann is operating. I'll send this data to Dr. Picon for his ideas. We want to send you our papers on the work which we did in Peru as soon as they are ready.

Please give our very best regards to your good wife and family and remember us to everyone in the Laboratory.

Very sincerely,

*E. L. Becker*

1 Incl - Summary,  
4 patients

E. L. BECKER  
Captain, USAF (MC)  
Department of Internal Medicine

NAME	AGE	HEIGHT cm	WEIGHT kgm	TOTAL BODY WATER %	EXTRA- CELLULAR FLUID %	TOTAL BODY FAT %
Romero, Benigno	17	158.5	56.3	58.2	20.5	20.5
Baldeon, Teodosio	20	159.0	56.4	59.4	21.8	19.5
Mayta, Emilio	36	165.0	63.7	63.2	21.5	18.3
Benavente, Hector	19	164.0	56.6	58.8	17.5	18.0

