seeing that under healthy conditions there is more oxygen absorbed than CO_2 excreted (i.e., the Respiratory quotient $\frac{CO_2}{O_2}$ is less than unity).

The amount of oxygen actually absorbed was not estimated, and, therefore, we cannot arrive at O_2 in the above equation by the direct method.

We might proceed on the assumption that the oxygen absorption was 1.5 litres per minute per person, which is not an accurate datum, but a safety limit for it. 1.5 litres per minute is 175 grammes per 82 minutes, the actual time of an experiment in which the CO_2 was measured.

The (moist) carbon dioxide can be found, as we ascertained the weights of the regenerators before and after each experiment, the CO_2 was excreted at the rate of 103 grammes per hour (141 grammes per 82 minutes), so that if we take a given case in which in an experiment the total loss of body-weight was 1245.2 grammes and the duration of experiment 82 minutes, we have, if 1254.2 is the total loss of body-weight, 1245.2+175—141=sweat lost=1279.2 grammes, or 15 grammes per minute.

This gives some idea of the magnitude of the loss of water from the skin, more than 1 kilogr. in a particular case; but as the oxygen absorbed was not estimated, I have not thought it well to apply to the difference of body weights, a correction which, though approximately correct, is not vertifiable in each case.

In this case the correction works out at 0.4,

$$\frac{175}{82} - \frac{141}{82} = 0.4$$

but as a typical correction 0.25 may be taken.

VI. The Elimination of Carbon Dioxide.

All the carbon dioxide excreted during a test was absorbed in what are called regenerators or "cartridges"—metal cases containing potassium hydrate in sticks. The gas is of necessity absorbed moist, as, of course, no provision is made to have it dried. The increase in weight in the regenerators, therefore, gave the weight of CO_2+H_2O eliminated from the lungs during an experiment.

The table below shows the actual increase of weight in grms. on six occasions taken at random:

	Weight (Kilos.)	Duration of Test (Minutes)	Increase in Weight of Absorbent (grms.)
A.	78.5	95	135.0
A.	77.7	30	52.7
B.	69.0	130	180.5
C.	76.3	98	176.4
F.	76.3	131	79.2
H.	69.2	60	107.8

Here the amounts of moist CO_2 vary considerably since the amount of CO_2 excreted varies with the weight of the subject and the length of the test. It is better to express the results as CO_2 excreted per hour per unit of body-weight, e.g., the kilo.: when this is done it is seen that the weight of (moist) CO_2 excreted in unit time per unit of body-weight is represented by a figure not greater than 2 and very rarely less than 0.5 grm. In other words, within certain pretty narrow limits, the excretion of CO_2 is the same per unit time per unit of tissue in very different individuals placed under the same rigorous exteral conditions.

CO_2 (moist) in grms. per kilo. per hour excreted in:

Subject	Flues	Meco	Weg.	Drager	Averages excreted by:
A.	1.30	1.12	1.13	0.86	A. 1.16.
A.		1.35			
A.				1.20	
B.	0.54	1.20	0.80	0.95	B. 0.87.
C.	1.43	1.40	{0.90 / 0.87}	1.40	C. 1.20.
D.		1.86		1.15	D. 1.50.
E.	1.36		0.88	1.40	E. 1.21.
F.	1.67	1.03		{0.65 / 0.30}	F. 1.21.
G.	1.32	0.70		1.43	G. 1.15.
H.	1.50	1.56		{1.34 / 1.20}	H. 1.40.
I.		1.16	1.16	1.82	I. 1.49.
J.	1.40			1.20	J. 1.30.
K.	0.83			1.15	K. 0.99.
Average:	1.25	1.28	0.96	1.14	

Although in a number of individuals the formation of CO_2 undoubtedly varies with their mass, temperament, diet, the intensity of their general metabolism, the external temperature, etc., yet under conditions which one might call those of maximum effort, the excretion of CO_2 in unit time is very much the same in amount per unit of weight of each of the individuals.