Corr. file - Trocmé

UNIVERSITY OF MINNESOTA
TWIN CITIES

Laboratory of Physiological Hygiene
School of Public Health
Stadium Gate 27
611 Beacon Street S.E.
Minneapolis, Minnesota 55455

September 30, 1981

Dr. Charles Trocmé
49 Rue Henri Déchaud
42100 St. Etienne, France

Dear Cousin:

Many thanks for your kind reply to my efforts on diet and hypertension. Your comments were most useful, as well as your letter to La Nouvelle Presse. You must not give me all that credit for courage, as indeed I have long ago cast my lot in the preventive medicine and public health arena. Cardiologists are still my primary peer group, but in my country, and increasingly in Europe, preventive cardiology is tolerably accepted if not embraced or held in high distinction.

I hope I didn't misinterpret Darby. You will note that the sentence says "the connotations and derivatives of the word 'salt'." However, the ambiguity is there and I have left the sentence now to read "the connotations of the word 'salt' include excellence, "to be worth one's salt", and hospitality, "above the salt", etc." Many thanks.

I had looked unsuccessfully for some time for some work which I knew existed on the possible role of essential fatty acids in high blood pressure. By chance in Capri this summer I met Dr. Iacono who had done the studies. He has a complex theory of the relationship between dietary linoleic acid, prostaglandins and hypertension which is not well documented. But he has some controlled experiments which are interesting in which calories and salt intake are maintained constant and the polyunsaturated/saturated fat ratio is changed--with an apparent lowering of blood pressure. However, his design is not very strong and his blood pressure measurement is not described. It's an interesting thought which needs more investigation. Similar ideas about the effect of vegetable versus animal protein are under study.

I am grateful for your thoughts on the recommendations. I agree with you that 2 grams daily is controversial. I used 2 grams because that is the figure where the evidence is clearcut concerning island populations. As one gets in the region from 3 to 5 grams the situation is less clearcut. However, I am taking your advice and suggesting that the "ideal" intake would be a population mean of around 3 grams with a range of 2 to 5 grams, that a "desirable" median population intake would be 5 grams with a range of 2 to 8 grams, and "feasible" within the next decade or so, as 8 grams with a range of 5 to 10 grams.

I think, as you, that the authors who suggest 2 grams very likely have not verified their own output. But again we're proposing an "ideal" based on other cultures than western. Just as we propose 160 milligrams per deciliter for cholesterol as an "ideal" median in populations. It would be one which not many of us could attain in a short time in our affluent environment, but it is one associated with the least coronary disease in population comparisons. So I am still torn between the ideal and the desirable, but doubt if I'll get much protestation if I move the median up to 3 grams.

You're quite right about the confounding by salt intake of the relationship between alcohol intake and blood pressure. I have updated the alcohol section as in the enclosed and am quite sure that it is still heavily confounded by a number of issues, most particularly weight and salt intake.

We have the same strategy in our American bars to encourage excessive drinking of beer or hard liquor by providing free salty snacks.

I think you are right that we haven't emphasized sufficiently the greater absolute sodium intake due to excess calories. I have added a short paragraph as follows:

> Finally, the absolute excess of sodium consumed along with caloric excess is insufficiently considered, being on the order of 0.25 grams per 100 kcal in the usual North American diet.

I have difficulty going further there because so much of our emphasis on obesity in our individual and community strategies is to get people to eat more calories, that is, by increasing the average calorie expenditure in the individual and in the entire community. In our population comparisons, the populations that eat the fewest calories are the more obese. This is simply because they are grossly sedentary. Also there is the issue of sodium consumption per unit of body weight and this is something I have not yet given sufficient thought to. Have you? For example, the excess sodium intake among the Japanese may be exaggerated even further because of their small body mass. Should there be an adjustment for body mass in the comparison of population blood pressures? If we are concerned with le milieu intern, I suspect we are dealing with the distribution of a given amount of salt throughout a different tissue mass. I am not all that familiar with the partitioning of salt, though I would assume that ~~lysine~~ tissue and plasma levels are extremely constant. Therefore it must be the extra vascular spaces that contract and expand according to the salt load with a lesser extent an expansion of intravascular volume. ~~Hypervolemia.~~ At any rate, I need to give some more thought to the absolute versus the relative amount of sodium for the individual or for the population, based on body size.

Your theme about "hypervolemie" I recognize from your earlier writings, and I am sure it is correct. I have attempted to address this in this rather vague addition:

> Further, the concept of whether sodium intake, "excessive or desirable", is relative to individual or population body mass, is insufficiently explored. Finally, the general health consequences of sodium-induced hypervolemia, on the venous as well as arterial side, is inadequately understood as it contributes to the cardiovascular workload of obesity and excess sodium consumption (Trocmé, 1960). Again, wide public health implications emerge.

Many thanks for your good letter.

Cordially,

Henry Blackburn, M.D.
Professor and Director

HB:lr
Enclosure
alcohol section pp. 32-34

Corres. - Trocmé

UNIVERSITY OF MINNESOTA
TWIN CITIES

Laboratory of Physiological Hygiene
School of Public Health
Stadium Gate 27
611 Beacon Street S.E.
Minneapolis, Minnesota 55455

October 13, 1981

Dr. Charles Trocmé
49 rue Henri Déchaud
42100 St. Etienne
FRANCE

Cher Cousin:

I note that Claude Paque of Rabat is familiar with your writings. Are you aware of his work? What is your understanding of his findings and ideas from the Moroccans with saline drinking waters?

The enclosed is updated with your help.

Regards,

Henry

Henry Blackburn, M.D.
Professor and Director

HB:lr

enc. Rome ms.