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Influence of High Protein Diet on Athletic Racers

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1. Meals of 2,300–2,400 Cal (1.2g of protein for physical weight per racer) were served for 2 track and field racers who underwent joint training. In addition to this, 260 g of beef was served daily to each racer for 2 weeks in order to keep the weight more than 2 g of protein. Thenceforth, both of them who had been unable to show noticeable records renewed their own records. As a result of the physical examination, following were noticed, namely, the increase in density of serum protein, the increase in NPN, the decrease in 17-KS in the urine and the increase in chemocorticoid, all of which are caused by the high protein diet. However, no definite result indicating that the high protein diet has been effective to the racers for their renewed records, was not obtained.
2. The high protein diet was served for 4 boat-racers for 3 weeks and by such a treatment the following results were obtained, that is, the increase in density of serum protein, the A/G proportion, the increase in NPN, the decrease in 17-KS in the urine and the acidopenia which seemed to have been affected by the high protein diet. No difference was noticed in the fatigue test by means of a back-stand. Namely, no ground indicating that the high protein diet has been effective to the racers' capacity of physical exercise.
3. The high protein diet was taken for 6 Marathon racers for 6 weeks. As a result of the tests conducted on the 6 Marathon racers, 2 athletic racers and 4 boat-racers in the preceding clause, it was noticed that the racers whose serum protein is 7 g/dl or less could gain 7–7.5 g/dl by taking of the high protein diet.
4. The preparation of the high protein diet for the athletic racers can be considered in light of the fact that if an organism reacts against the physical exercise, a kind

of stress by negative N-balance, namely the dissolution of protein, the racers taking enough protein before the races will easily overcome the stress.

5. As a considerable number of the Japanese racers lack the protein in their diet, it is considered that there will be possibilities of giving a favourable influence on their exercise by the protein diet.