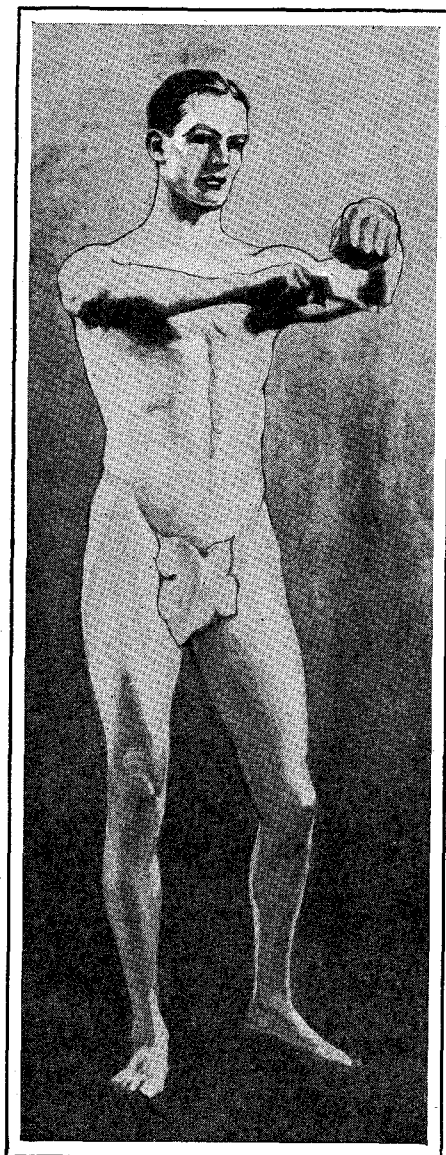


# VARIATIONS OF ATHLETIC TYPES

BY R. TAIT McKENZIE, M.D.



Shows the typical oarsman. Long in the limb, short in the trunk, with finely drawn lines and corresponding closely to the Apoxyomenos of the school of Lysippus, which represented the change in the Greek ideal to a more graceful and slender type

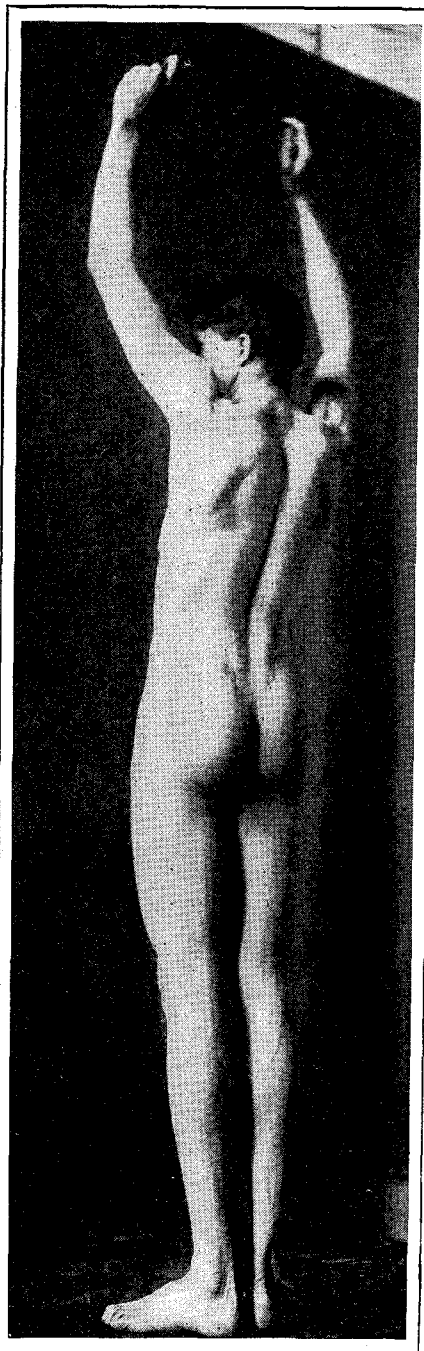
**T**HE attempt to make the human animal conform to an average of height and weight by overfeeding the slender and starving the stout, by driving the fat and resting the thin, or by changing the surroundings of either, is naturally foredoomed to failure.

The variations within the normal are what give diversity and interest to the study of man and his measurements, and Sir Francis Galton, that great anthropologist, truly says: "It is difficult to understand why statisticians commonly limit their inquiry to averages and do not revel in more comprehensive views. Their souls seem as dull to the charm of variety as that of the native of one of our flat English counties,

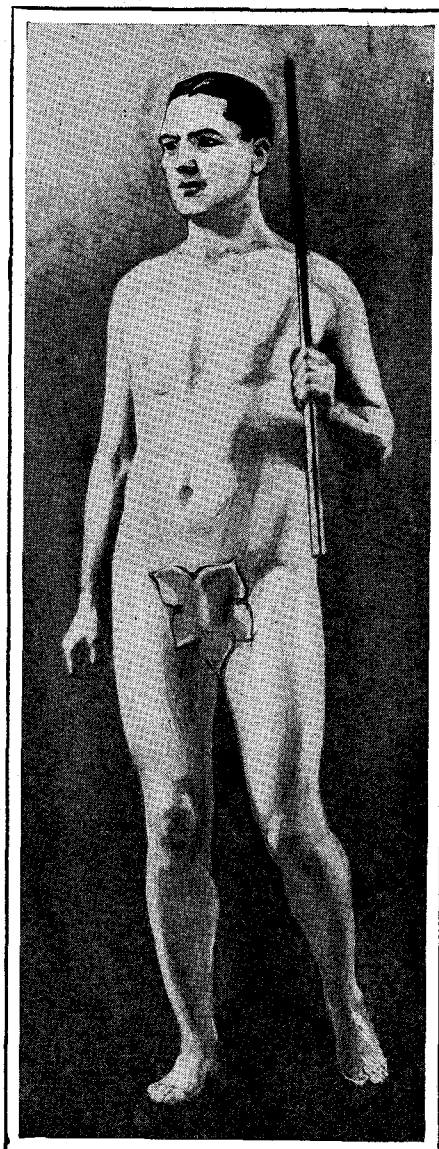
whose retrospect of Switzerland was that if its mountains could be thrown into its lakes, two nuisances would be got rid of at once."

Nowhere can one find this divergence within the normal so beautifully shown as among athletes, whose type of figure must be adapted to the particular feat in which they excel.

The place of sport and exercise in



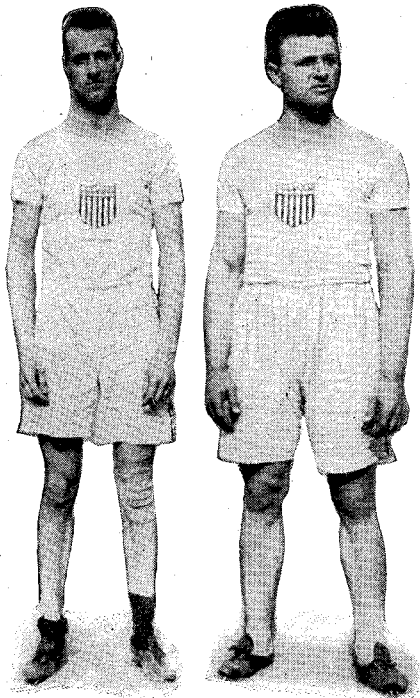
This is the finest example of the greyhound type, the figure slender and graceful. This man was a triple champion in the Olympic Games in the standing high jump, for which his long, slender muscles and light bony structure peculiarly fitted him



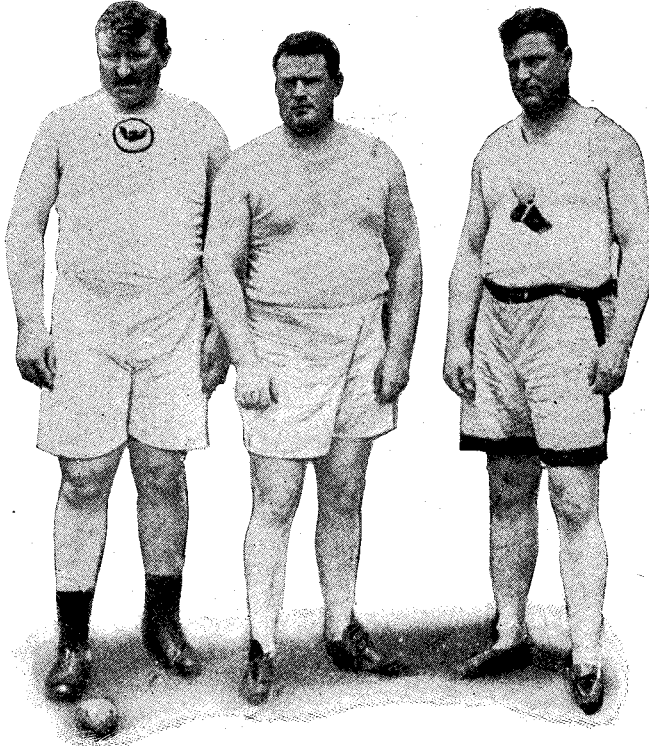
This photograph of a great guard in football shows the powerful neck and trunk and the short legs that denote great vitality and strength. He is the type represented by the Doryphoros, the early Greek ideal of manly beauty

changing the development of the body has been greatly misunderstood. It is a common belief that football develops large and burly men, that swimming develops fat men, that running makes men's legs long, and that jumping develops human kangaroos. This is, after all, putting the cart before the horse. A man will select naturally such events as will enable him to succeed through the particular structure of his individual body. The wrestler with a short neck, powerful shoulders and body, and great muscular strength has an enormous advantage over a competitor whose long neck lends itself to a good half Nelson. The hurdle runner, who must clear the ten yards between the hurdles in three

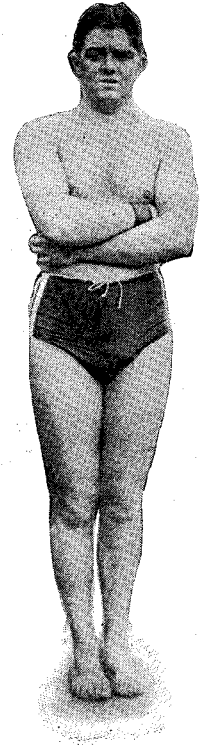




Here we see two champions, one a high jumper and the other a heavier of weights. The fine bones of the jumper and the slightness of his frame are unmistakable, while the solid torso, short sturdy legs and neck, and broad shoulders of the shot-putter account for his driving power



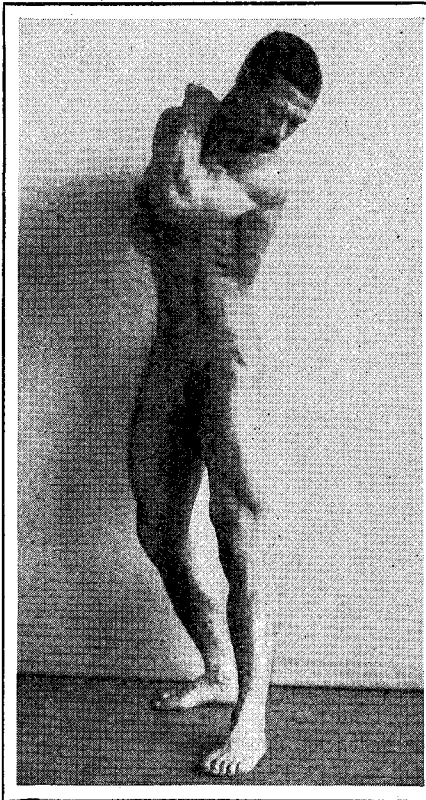
Three champions in putting the shot and throwing the hammer. No training could change the Herculean type of these men and make them sprinters and jumpers. We suspect that not much attention would be paid to those who would be most likely to object to the build of these men. They are star athletes of the New York Police Department



The fat boy is not debarred from athletics altogether. He may still be a plunger, as every spectator at a swimming meet well knows, but he cannot be changed into the greyhound

strides, should have a certain height and length of stride if he is to have any chance of success in this particular competition. The hammer-thrower needs height, and the shot-putter has an advantage in being able to place great weight behind the missile. The jumper has, like the greyhound, an advantage whose light, airplane-like skeleton is driven by lithe but powerful muscles.

As far back as the time of Philostratus (B.C. 50) this division of men according to their muscular ability was made, and in this quaint way he divided them into classes according to the animals they most nearly represented, such as the bear, which would remind one of the wrestler; the lion, which would make us think of the football player and boxer; the greyhound, the sprinter; and the stag, the oarsman and perhaps the jumper. In spite of this, however, it is not always easy to choose from the physique alone the type that will succeed in any one form of muscular endeavor. The short legs of a jumper may be more than counterbalanced by a fine power of concentration which sends him over the bar far above his head. William Byrd Page jumped about eight inches over his own height. Sprinters are tall and short, stout and thin, counterbalancing physical defects by unusual intelligence or mental concentration, and it is only where the athlete comes in competition with certain immovable apparatus like the hurdles or implements like the shot and hammers that his type must conform to their requirements. The great athlete, then, is



There is as much individuality in the shape of the muscle as in the expression of the face, and, although a muscle may be developed within its limits, its form cannot be greatly changed. This man was a carpenter by trade, had never taken much exercise, and was no stronger than the average man of his height and weight, in spite of the beautiful muscular development shown in the picture

perfect after his kind. Even the sprinter, whose range of variation is more than most athletes, is typically a man of five feet nine inches, with a square chest, well-muscled shoulders and torso, legs sturdy though not unusually muscular, with rather light bones, and always a fine power of mental concentration and a short latent period.

Future investigations will undoubtedly be directed toward discovering the ideal types of figure rather than in trying to drag these types up or down to the average, as the case may be.

The statuette the picture of which was published with the announcement of this article in last week's issue is modeled from the measurements of one hundred runners who could cover one hundred yards in ten seconds or less. It may be said to represent the athlete who has been most successful in trials of speed, long-limbed, small-boned, and well muscled.

An average of the fifty strongest men at college would not show a Hercules, but rather a well-developed young man whose proportions would go midway between the two extremes of slenderness and stockiness. Like most scientific investigations, it is disappointing from the spectacular standpoint because the individual peculiarities become obliterated in the mass of statistics.

I believe that Mr. Taylor's plan of classifying individuals according to type rather than according to general averages is much more interesting and much more sound than any plan that has hitherto been devised.



# CLEAR THE CHANNELS

BY EDWARD A. FILENE

DIRECTOR, INTERNATIONAL CHAMBER OF COMMERCE

**T**HE channels of international trade are choked. Ships swing idly at their moorings, factories are at a standstill for lack of raw materials, jobless men walk the streets, while between the nations economic barriers kill trade. International traders, with no assurance of what conditions will be on the morrow, do not dare to risk any but spot transactions. Many treaties are made, but few are effectively carried out. The world draws a breath of relief only to find itself still in the chaos of international misunderstandings with little gained. Even in the United States millions are out of work. Minorities are restless and turbulent everywhere, and under democratic forms of government they are proving themselves capable of blocking each effort to restore the free play of amicable international relationship.

Trade cannot flow through channels blocked by exorbitant tariffs, governmental prohibitions, preferential export taxes, monopolistic control of basic raw materials, national attempts to secure or retain "war" industries regardless of economic justification, and all the other barriers to free economic intercourse attendant upon the violent outburst of nationalism in industry since the close of the war.

The commerce of the world has suffered more disastrously from the prevailing uncertainty as to what governments are going to do next in tampering with natural economic conditions than from any other one cause. If one country wants goods and another country can supply them, there is always some way that the trade can be arranged if conditions could only be made stable enough to eliminate the trade-destroying fear of new aggressions—of new wars, economic or military.

The war taught all the world the importance of basic products and key industries, and it is not surprising that the newer and weaker countries of Central Europe should erect economic barriers to control the one and encourage the other. Suspicion and jealousy reign as part of the economic war raging in Europe.

The Baltic states have erected barriers of export taxes, each hoping to prevent the outflow of its raw materials and to encourage the creation of industries within its own borders. The attempt is natural enough where leaders are inexperienced in statecraft and ignorant of economic laws.

What difference does it make, we ask, if Latvia, Esthonia, and Livonia vie with each other in the extent and height of their export tariff walls? They must protect themselves until they discover who are friends and who are enemies in

the countries around them. Naturally they are timid and cautious.

We may note with relief that the Balkan States have already passed through the stage of unrestrained use of export taxes and are modifying their artificial barriers. Czechoslovakia and Bulgaria have reduced or canceled many of the tariffs they imposed two years ago.

This might indicate that the use of these taxes was a passing whim and that finally these newer members of the world's community of nations would recognize generally the experience of the larger European countries in the eighteenth century, when more friction than good resulted from the use of export restrictions.

Export taxes, unlike import duties, throw the obvious burden on the purchaser. In theory as well as in fact the largest proportion of such taxes are paid by the purchasers in the other countries, and so these taxes are, in effect, "taxation without representation." Export taxes were in use extensively a century and a half ago, but bitter experience with the international differences resulting from them caused so strong a revulsion of feeling against them that our forefathers specifically forbade the use of export taxes in our Constitution. The United States, therefore, has never imposed an export tax and has had little experience with this type of control.

The ominous note, however, comes when we learn of the adoption of export taxes by British legislatures for the control of basic raw materials that are needed by all the world. Great Britain had accepted freedom of trade as its commercial policy and was teaching the whole world an amazing lesson in applied economics, prospering wonderfully without artificial trade restrictions.

Suddenly within the past few years the British Dominions have thrown over the whole structure of the Empire's former international policies. Offspring of the nation which has stood out boldly during the past half-century to demonstrate the advantages of free and friendly economic relations are now shutting themselves off from the rest of the world in order to maintain control

of basic commodities and to prevent other nations from getting these commodities without paying toll.

Lloyd George makes treaties in vain when New Zealand and Australia undertake to monopolize the phosphate output of the island of Nauru. Here is a little Pacific island, taken from Germany and given to these Dominions to administer for the Allied and Associated Powers under a mandate. Under German rule its phosphate production was sold freely to all countries of the world; it is one of the largest and richest deposits known, and the product of that little far-away island may become of immense importance as the world's farmers turn more and more to intensive cultivation. Under their present scheme, the British Dominions get all the phosphate production they want at cost price and other nations must stand around, hat in hand, waiting to see if there will be any phosphates left. If there is any surplus over the needs of the British Dominions, the other countries may then be permitted to buy at monopoly prices.

The influence of treaties to maintain peace on the Pacific is lessened when the Malay Peninsula places a prohibitive tax on the tin ore going anywhere except to British ports.

It is excellent to eliminate "sore spots" in China, but this is not enough. When India places a preferential export tax on hides and skins which is calculated to prove a death-blow to the newly established glazed-kid industry in this country, and when West Africa places a preferential export tax on palm kernels at the time when, cut off from her usual supply of vegetable oils, this country was building oil crushers of her own, it is clear that military treaties must be supplemented by some solution of the export-tax evil if international good will and commerce are to rehabilitate the world.

So far, as fast as one obstacle has been laboriously dragged from the channels of trade another has been shoved into the current.

If international distrust and jealousy are to be held in check, every nation must give up the idea of arbitrarily controlling or monopolizing any basic raw materials and must release them freely to all comers on equal terms. Unless discussion of the control of basic raw materials is permitted, economic conferences cannot accomplish the full measure of good expected of them for the restoration of the economic equilibrium of the world. Only careful study and free discussion will disclose the supreme danger threatening the world from this new poison gas of the economic war which is preventing the rehabilitation of our war-torn world.

## LUCY FURMAN

will contribute a vivid sketch of the work of a courageous Kentuckian and of his warfare against moonshiners. Her forthcoming article is entitled

"A Right Sheriff"