

First; it should be thoroughly understood that the decision as to whether a pupil is to participate - so far as his physical condition is concerned - should rest wholly in the hands of the school physician or of the physician who is Director of the health service.

Second; the physical examination given should be thorough enough so that it will really give definite scientific information about the physical condition of the candidate. An examination including only a hurried listening to heart sounds, plus a quick examination for hernia is a farce as an agency for protecting the youngster.

What organs bear the chief load in strenuous athletic competition? At the head of the list most physicians would place the circulatory organs. The tests should include then a careful examination of the valve sounds and of the size of the heart. Closely correlated to these is the blood pressure. Apparently the rise in blood pressure is the earliest sign of circulatory strain. The opinions of life insurance medical examiners, of Dr. Greenleaf, and of Drs. Robinson and Brucer, to name only a few, indicate that not more than 120 over 80 indicates a circulatory system that may safely be subjected to athletic stress. This does not necessarily mean that all those having a blood pressure higher than this should be barred from competition. It does mean, however, that they should be watched with great care - i.e., frequently re-examined - and those showing bad effects from the activity should be removed from competition. Closely related to these heart and blood pressure tests are the cardiac functional tests, one of the most interesting being that devised by George Meylan, M.D. This simple test notes the difference in pulse rate in the recumbent position and that in the standing position. Of this change, Dr. J. H. McCurdy says: "This test compares the lying and standing pulse, a variability of more than 20 beats in changing from the lying to the standing position representing at least doubtful condition." Such cases should not be permitted to participate until and unless careful correction of fatigue and other basic conditions brings about a more nearly normal reaction to the test.

The presence of hernia should - in the vast majority of cases - bar a pupil from competition in such a vigorous sport as basketball. Not only is the activity great, but the postures in throwing tend to put great strain on the abdominal muscles.

The kidneys also have to carry an extra heavy load when physical activity is great. This is shown by the fact that a considerable portion of competitors show a marked increase in urinary albumin after severe exercise. The pupil whose urine habitually, when on normal diet, shows pathological amounts of albumin should probably be kept out of violent physical activity. Doubtful cases should be kept under observation, by means of repeated urinalyses.

A noticeable percentage of adolescents have an undiagnosed diabetes. The urinary examination should include, therefore, a test for sugar. Not all those showing increased sugar excretion are pathological, but such cases should be examined repeatedly. Of course, those found to be true diabetics should be kept out of the - for them - too vigorous physical activities of such a game as basketball.

Closely tied up with these other indices of physical condition is the factor of weight. Seemingly underweight is not in itself a reason of rejection. The seriously underweight pupil will be eliminated anyhow in most cases by the process of competition.