

There is no rhyme nor reason to the committee on rules which are attempting to speed up the game for the pleasure of the spectators, not taking into consideration the players, and in my opinion, it is time the medical men of the state used their influence to have this matter corrected.

Very truly yours, C. Paul White, Pres. Kewanee Bd. Health

Dr. White also wrote a letter to the President of the Kewanee, Illinois, Board of Education in which, as a physician and as President of the Kewanee Board of Health he protested against the basketball game as played today. He says: "I feel it is my duty to register a protest on the basketball game as it is played today.

Eliminating the center jump has apparently speeded up the game twenty to thirty per cent, which already was fast enough for the physical health of the players.

No matter how well checked these boys are, there are bound to be some players whose hearts will not, and cannot, stand the strain, and in my opinion the untoward effects will far surpass any benefit which might otherwise be gained from this game.

I trust that you will use your influence that the rules may be so changed that a boy must either be substituted at regular intervals or that more rest periods may be forced upon the players to eliminate this great danger."

Bowyer and Anderson * show that with the new ten second rule, the game of basketball is extremely strenuous on junior high school boys from twelve to sixteen years of age. To determine whether there is any harmful effect on the hearts of boys of this age playing basketball, they have checked the blood pressure and heart rates of boys before and after each basketball game. They also made a pre-season and post-season test. The mean or average of the pre-season systolic pressure was 108 plus or minus 2.78, and the mean of the post-season pressure was 111.6 plus or minus 2.95. The true difference between the means was 3.6, which was a gain in systolic pressure. The critical ratio was 0.89, which indicates that the mean of the pre-season and post-season test is not statistically significant. The authors draw the conclusion from their studies that basketball under the old rules did not have any harmful effects on junior high school boys.

With their conclusions of 1936-1937 showing no harmful effects, they continued the study under the new rules. One of the most interesting comparisons is made between a hard game and an easy one. In the easy game, sixteen boys played at some time or other. There was not a boy on the squad who played the whole game. The heart rate taken twenty minutes after the easy game shows that in all the boys but one it had returned to normal, and in this one it was only a fraction higher. The results of a hard game show that the blood pressure of some of the boys goes down, while the pressure of others is increased by exercise. When the blood pressure goes below normal, it indicates a period of staleness or acute fatigue. The boys who did not play the full game would return to normal very quickly after the game. From this the authors decided that a full game of basketball under the new rules was too strenuous on junior high school boys.

The mean pulse rate of the four hardest games of the authors' squad was found to be 146 five minutes after the game. After twenty minutes the heart rate was still 115.

* "Effects of Basketball on Junior High School Boys", A. B. Bowyer and N. S. Anderson, Buckhannon, West Virginia Medical Journal, Charleston, February, 1939, p. 89.