

**Thesis Title** Effects of a Basic Training Program  
on the Iron Status and Physical Fitness  
of Soldiers in the second recruitment  
in 1991 at Pramongkutklao Hospital

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**Degree** Master of Science (Public Health)  
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### Abstract

A survey research was performed on the second recruitment soldiers in 1991 from Pramongkutklao Hospital Medicine Battalion. There were 119 soldiers participated. The survey was carried out during November 6, to December 30, 1991, in order to study effects of a basic training program to hemoglobin, hematocrit, and iron parameters and the correlation among all variables.

In order to examine the physical fitness, all soldiers must have the physical fitness tested for four-standard criterias. They consist of 300 meters running with in a given time, hang with elbow bent, front support and two-minute sit up. Soldiers' blood were taken to check for the hemoglobin, the hematocrit, the serum iron, the serum ferritin and the transferrin saturation. No

significantly change of the hemoglobin and the serum iron were found ( $p$ -value = 0.105 and 0.488 respectively), the hematocrit, the serum ferritin and the transferrin saturation declined significantly ( $p$ -value < 0.001).

After the completion of the basic training program, the improvement of the physical fitness was determined by the significantly improved of scores of the four-standard criterias of the physical fitness test ( $p$ -value < 0.001).

In this study; the program was started with the hardest training and gradually declined afterwards. The result revealed no association between the iron status and the physical fitness, which was indicated by 300 meters running, hang with elbow bent, front support and two-minute sit up. Moreover, there was no correlation between iron deficiency anemia and physical fitness.