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Effect of different durations of active warming-up on sprinting performance

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■ **ABSTRACT**

The aim of the study was to know the effect of active warm up of varied duration on the performance of sprinters. Thirty male students, 18 to 25 years of age, were randomly selected from LNUPE, Gwalior as the subjects of the study. Each subject was tested for 100 meter sprinting performance after selected durations of active warm-up. The different durations of active warm-up randomly administered were 10 and 15 minutes. The order of warm-up given for particular day was assigned at random which had been planned in advance. The time taken for 100 meter sprint was recorded to the nearest of 1/100th of a second for comparison with initial performance without warm-up. To find the difference among the means of performance for 100 meter sprinting without warm-up and with active warm-up of different durations, one way analysis of variance was used which was followed by the least significant difference test to determine the difference between the means of different duration when taken in pairs. The results of the study under the condition and limitations of the present experiment seems to permit that the different durations of warm-up improves the sprinting performance in comparison to the performance without warm-up.

■ **Key Words :** Active warm-up, Sprinting performance

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A warm up is the act of preparing for an athletic event or workout by exercising or practicing for a short time beforehand. Warming up helps to reduce your risk of injury and the aches and pains that come with exercise. Cold muscles do not absorb shock or impact as well, and are more susceptible to injury. Experts agree that the main purpose of warm-up is to increase the blood circulation in order to raise both the general body and the deep muscle temperatures, which in turn help to heat up the muscles, ligaments and tendons in preparation for more vigorous activity The warm-up increases muscle efficiency, reduces potential for muscle pulls, improves reaction time and improves the speed of movement of muscles and ligaments. It is difficult to recommend specific intensity and duration of warm-up for every person, but most research in this area suggest an increase in body and muscle temperature of approximately one to two degrees Fahrenheit to be adequate. The duration and intensity of warm-up should be adjusted according to the environmental temperature and the amount of clothing worn. The higher the environmental temperature and the greater the amount of clothing, the sooner the desired body temperature is attained. In any case, no more than fifteen minutes should elapse. Competitive and recreational athletes typically perform warm-up and stretching activities to prepare for more strenuous exercise. These preliminary activities are used to enhance physical performance and to prevent sports-related injuries. On cold days the warm-up should not end more than ten minutes before the kick-off or activity, and on extremely cold days (freezing temperatures) the warm-up could be performed in the change room. Alternatively, in warm climates, the warm-up could be either shortened or finish up to twenty minutes before kick-off or activity. Most important, at all times players should avoid significant decreases in muscle temperature as the game or activity approaches. A good indicator of optimal