KEY KINEMATIC ELEMENTS IN SHOW-JUMPING EVENT

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Abstract

The present study was designed to investigate the difference in the mechanism of fence jumping by Athlete Horse. The aim of the study was to find the difference in mechanics between different types of jump designed in the show jumping circuit. Twenty show-jumper horses were selected and given trials on type of jumps. This inquiry was conducted on the athletic horses that were specializes in the show jumping event. Two cameras were placed to record the video of the jumps. First camera was placed on right side of the jump and second camera in front of the jump. Successful jumps were selected, slashed, digitalized through video motion analysis software to get the kinematic data. The main technical aspects of specific proof of jumping the horse over the different type of fences was examined from the kinematic point of view. Using the Motion analysis software – MaxTray 2D, the study received a series of kinematic parameters (time, position, angles) discussed specific issues in research, processing and interpretation leading to the general conclusion, that Successful jumping i.e. crossing the designed jumps are influenced by take-off distance, jumping velocity and forelimb flexibility. Selection of horses for superior jumping capacity and performance can be aided by kinematic analysis, which may shorten training time and improve performance.

Keyword: Biomechanics, Athlete horse, show jumping, Limb Kinematics, motion Analysis Software.

INTRODUCTION

The universe of recreations and games is regularly extending with expanding power of rivalry and augmenting logical investigations of human developments. The extreme complex development for the best level execution in sports calls for extraordinary measure of physical limit, Physiological limit, Psychological limit and mechanical limit as well (Hay, 1993). To make the mechanical movement efficient and effective a mechanical development is requiring. For fulfilling the purpose, a Biomechanical evaluation techniques are adopted.

A game on horseback was the piece of preparing to be a decent officer. The alluring natures of the steed and his flexibility have spoken to man for more, likely, than history relates. For a considerable length of time the stallion was the vital methods for transport yet now the accentuation has moved from utility to joy. Gradually different breeds of horses and ponies have been selected, developed and improved to suit a wide variety of equestrian activities, and those lucky enough to have enjoyed contact with horses realize that they have much
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