A Virtual Bike Simulator System for Balance Rehabilitation Training using Virtual Reality
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This paper describes a development of rehabilitation training system for the postural balance control. A new rehabilitation training system, designated as a virtual cycling system, was developed to improve postural balance control by combining virtual reality technology with an unfixed bicycle. In this experiment, 20 normal adults were tested to investigate the influencing parameters of postural balance control. In order to evaluate the usefulness and the training effects of the system, several parameters including path deviation, cycling velocity, cycling time, center of pressure, and head movement were evaluated and analyzed quantitatively. Also, to improve the effect of balance training, the visual feedback information related to the subject's weight shift was ...