	研究業績英文表記
和文	
表題	女子ハンドボール競技中における高衝撃動作の抽出
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英文	
Title	Extract of high-impact movements and play during female handball games.
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Abstract	The aim of this study was to identify the breakdown and frequency of high-impact movements during competition to investigate the factors contributing to injury and disability in handball. The subjects were six high school female handball players. The subjects attached an acceleration sensor and played a handball game. From the acceleration data, movements that resulted in high impact (composite acceleration of 4 G or more) were extracted. The movements during high-impact events were identified from synchronized video images. In a total of 158.7 min of the six participants, 3790 movements with a synthetic acceleration of 4 G or higher were extracted, with a frequency of 23.9 movements/min. In terms of movement classification, running, deceleration, side stepping, and forward stepping were the most frequent movements, in that order. In terms of play classification, the most frequent movements were moving to defence, fast attack, defence of fast attack, and moving to attack, in that order. It was found that the movements with the highest impact on the body during handball competition were running, deceleration, side stepping.
keyword	Handball; female; acceleration; high impact; injury and disability.

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