

**Evaluation of Walk-ability on Walking Surfaces Using Surface Electromyography**

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**ABSTRACT**

In Japan, where the population is rapidly aging, it is important to develop walking spaces that enable safe and comfortable mobility so that everyone can participate in society with peace of mind. In addition, many people are walking due to the recent increase in health consciousness. However, there are no concrete indicators that contribute to the management of road surfaces such as sidewalks, and a rational road surface management method for walking spaces is needed. In this study, we focused on surface electromyography (EMG) as an objective road surface evaluation method from the human point of view. Therefore, we compared the amount of muscle activity of the pedestrian's lower leg, the slip resistance coefficient of the road surface measured by American Slip Meter (ASM), and the depth of the surface measured by Circular Track Meter (CTM), and obtained results that lead to the selection of pavement materials that can prevent injuries from falls caused by pedestrian stumbling and improve the walk-ability.

*Keywords: Walking space, EMG, ASM, CTM, Fall Prevention*