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## **Spatio-temporal gait during fat ground walking and obstacle crossing one year after bariatric surgery**

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**O**besity negatively impacts motor function leading to an increase in fall risk. Massive weight loss improves some aspects of gait on flat ground. However, we have little information about whether gait changes during flat ground walking and during more complex motor tasks beyond flat ground walking (e.g., crossing obstacles). The purpose of this study was to examine how massive weight loss after Roux-en-Y bariatric surgery influences gait during flat ground walking and obstacle crossing one year post bariatric surgery. Nineteen adult females walked under 5 conditions: Initial baseline walking on flat ground, crossing 3 obstacle heights and final baseline walking on flat ground for a total of 25 trials. Spatio-temporal gait parameters were collected simultaneously using a gait carpet and with body-worn sensors. Gait improved post-surgery with the strongest effect observed for double limb support time