OPEN SESSION

EMG-based eating detection: a new tool to address underreporting?

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Research on eating behavior is limited by an overreliance on self-report. It is well known that actual food intake is frequently underreported and it is likely that this problem is overrepresented in vulnerable populations. The present research tested a chewing detection method that could assist self-report methods. A trained sample of 14 participants kept detailed eating records during one day and one night while carrying a recording device. Signals recorded from sensors placed behind the right ear were used to develop a chewing detection algorithm. Results showed that eating could be detected with high accuracy (sensitivity, specificity >90%) compared to trained self-report. Thus, EMG-based eating detection might usefully complement future food intake recording approaches in healthy and vulnerable populations.