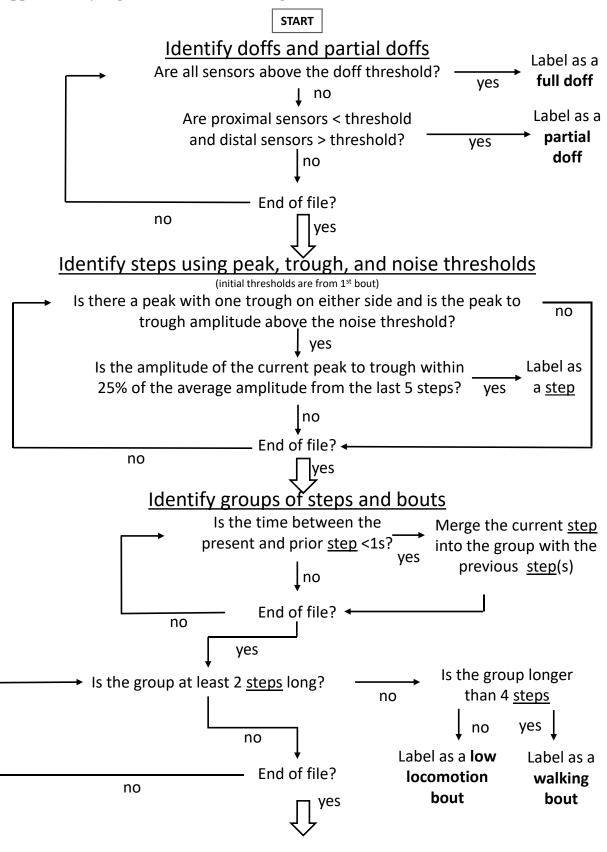
Supplementary Figure F1. Data Processing Flowchart for Identification of Activities.



## Create envelope for sit-stand detection Is the bout labeled a walking bout? no Use previous neighbor interpolation of the median of the peaks to make an upper envelope Use previous neighbor interpolation of the median of the valleys to make a lower envelope Calculate the sit-stand threshold based on the predetermined ratio between upper and lower envelope End of file? no Identify shifts For each section between doffs and bouts, take the average and standard deviation of a 5-s window of a 5-point moving average Is the point within and following the window Label section as a within 2 standard deviation of the average <u>shift</u> Is >80% of the shift above the sit-stand threshold? Label as a sub-section no yes Label as a Label as a End of file? stand shift sit shift no Label sub-sections as sit, sit shift, stand or stand shift For each sub-section, is the Is $\geq$ 80% of the sub-section time between shifts > 5s? yes above the sit-stand threshold? Yes no Is >80% of the sub-section Is >80% of the sub-section Label as below the sit-stand threshold? yes a stand above the sit-stand threshold? no yes Label as a Label as a Label as a stand shift sit shift stand shift End of file? ◀ **END** ves