# EVA analysis by Acti4

The standard analysis performed by Acti4 determines the total duration of the basic activity modes: lie, sit, stand (still), move, walk, run, stair walking, cycle and row. As an option selected in the 'Analysis setup', Acti4 (from ver. 1801) can determine the duration of the activity modes according to a time classification scheme (activity duration analysis). The output from the analysis are not included in the standard output by Acti4, but saved in a separate file selected by the user.

## Duration classification

| | | |
|---|---|---|
| T1 | <5 | seconds |
| T2 | 5-10 | " |
| T3 | 10-15 | " |
| T4 | 15-30 | " |
| T5 | 30-60 | " |
| T6 | 1-2 | minutes |
| T7 | 2-5 | " |
| T8 | 5-10 | " |
| T9 | 10-20 | " |
| T10 | 20-30 | " |
| T11 | 30-60 | " |
| T12 | 1-2 | hours |
| T13 | 2-4 | " |
| T14 | 4-8 | " |
| T15 | >=8 | " |

The activities include the basic nine modes and some combined modes:

## Activity modes

Lie
Sit
Stand (still)
Move
Walk
WalkSlow
WalkFast
Run
Stairs
Cycle
Row
LieSit             lie + sit
StandMove      stand + move
OnFeet           stand + move + walk + run + stairs
LPA               stand + move + walk slow
MVPA            run + stairs + cycle + row + walk fast

The activity duration analysis can be performed alone or in the same run as the standard analysis. The output of the activity duration analysis is saved separately in a user selected csv-file including 503 columns (variables). The first 7 columns are identical with the output from the standard analysis:

LbNr            Subject running number
Type            Type of interval (A1/B1: before work, A2/B2: work, etc.)
Start           Start of interval (dd/mm/yyyy/HH:MM:SS)
Stop            End od interval (dd/mm/yyyy/HH:MM:SS)
Time            Duration of interval (number of hours including non valid periods)
OffThigh        Duration with invalid thigh data, i.e. no activity classification possible
OffHipTrunk  Duration without data from hip or trunk, i.e. distinction between lying and sitting not possible

Then for each of the activity modes there are 31 columns, where the first ('H_mode') tells the total duration (hours) of the activity 'mode' (similar to the standard output for the basic activity modes) and the next 2x15 columns specify number of periods with duration Tn ('N_mode_Tn') and summarized duration of periods (hours) with duration Tn (n=1,2,…15).