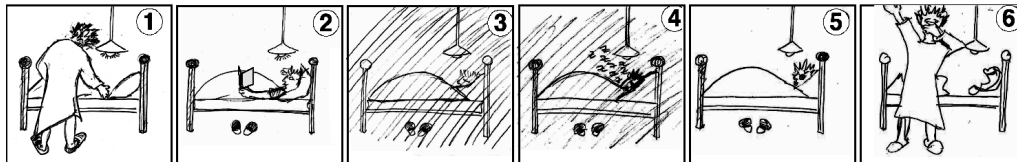


Munich Chronotype Questionnaire for Shift-Workers (MCTQ^{Shift})

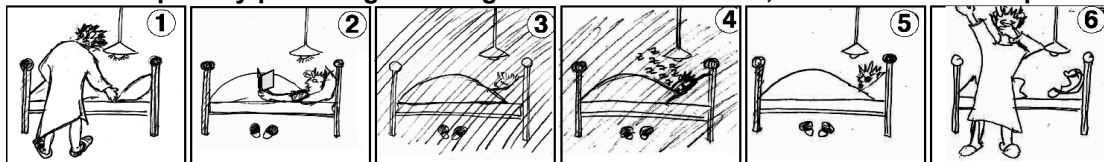
The following questions concern your sleep- and wake behavior on work days and free days. Please answer them with regard to your current shift schedule, i.e. not all combinations have to be filled out! Also, please reply with regards to the current season (i.e., the last 6 weeks). Please try to answer ALL questions, even when an answer seems difficult! Spontaneous answers are often the best. Please help us in the evaluation of your data by providing unambiguous time references (e.g. 23:00 rather than 11:00 PM).

How to fill out the Munich ChronoType Questionnaire:



- Image 1:** The time when you went to bed.
- Image 2:** Note that some people stay awake for some time when in bed!
- Image 3:** The time when you “decided” to sleep, i.e. closed your eyes or turned off the lights.
- Image 4:** Minutes you usually spent of average on falling asleep.
- Image 5:** Time when you woke up.
- Image 6:** Minutes to get up.
- Alarm:** Indicate whether you used an alarm or not (NO, if you woke up before the alarm signal went off).
- Between two shifts:** Please indicate your sleep times between two shifts.
- Between two free days after a given shift:** Please indicate your sleep times between two free days after a given shift block (i.e., 2 free days after 4 days of morning shift in a row).

Please help us by providing unambiguous time references, i.e. 23 instead of 11pm!!!



Between two Morning Shifts

I go to bed at _____ o'clock. (Image 1)

Note that some people stay awake for some time when in bed ! (Image 2)

I actually get ready to fall asleep at _____ o'clock. (Image 3)

I need _____ minutes to fall asleep. (Image 4)

I wake up at _____ o'clock. (Image 5)

! with alarm ! without alarm

I get up after _____ minutes. (Image 6)

I usually take a nap: ! Yes ! No

If „Yes“: I take a nap from _____ o'clock to _____ o'clock.

There are particular reasons why I **cannot** freely choose my sleep times on morning shifts:

Yes ! No !

If “Yes”: Child(ren)/pet(s) ! Hobbies ! Others, for example:

Between two free days after Morning Shifts

I go to bed at _____ o'clock. (Image 1)

Note that some people stay awake for some time when in bed ! (Image 2)

I actually get ready to fall asleep at _____ o'clock. (Image 3)

I need _____ minutes to fall asleep. (Image 4)

I wake up at _____ o'clock. (Image 5)

! with alarm ! without alarm

I get up after _____ minutes. (Image 6)

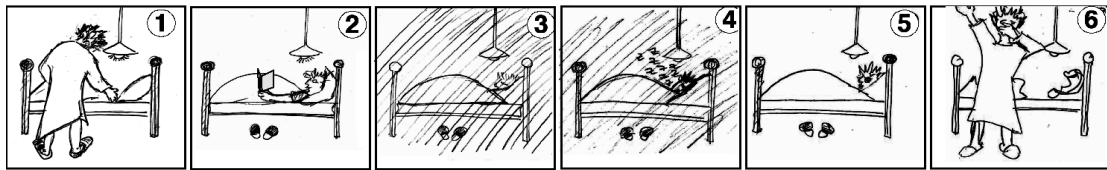
I usually take a nap: ! Yes ! No

If „Yes“: I take a nap from _____ o'clock to _____ o'clock.

There are particular reasons why I **cannot** freely choose my sleep times on morning shifts:

Yes ! No !

If “Yes”: Child(ren)/pet(s) ! Hobbies ! Others, for example:



Between two Evening Shifts

I go to bed at _____ o'clock. (Image 1)

Note that some people stay awake for some time when in bed ! (Image 2)

I actually get ready to fall asleep at _____ o'clock. (Image 3)

I need _____ minutes to fall asleep. (Image 4)

I wake up at _____ o'clock. (Image 5)

! with alarm ! without alarm

I get up after _____ minutes. (Image 6)

I usually take a nap: ! Yes ! No

If „Yes“: I take a nap from _____ o'clock to _____ o'clock.

There are particular reasons why I **cannot** freely choose my sleep times on evening shifts:

Yes ! No !

If “Yes”: Child(ren)/pet(s) ! Hobbies ! Others, for example:

Between two free days after Evening Shifts

I go to bed at _____ o'clock. (Image 1)

Note that some people stay awake for some time when in bed ! (Image 2)

I actually get ready to fall asleep at _____ o'clock. (Image 3)

I need _____ minutes to fall asleep. (Image 4)

I wake up at _____ o'clock. (Image 5)

! with alarm ! without alarm

I get up after _____ minutes. (Image 6)

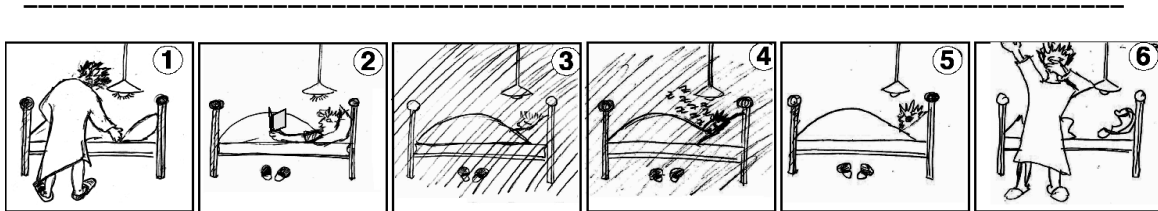
I usually take a nap: ! Yes ! No

If „Yes“: I take a nap from _____ o'clock to _____ o'clock.

There are particular reasons why I **cannot** freely choose my sleep times on free days after evening shifts:

Yes ! No !

If “Yes”: Child(ren)/pet(s) ! Hobbies ! Others, for example:



Between two Night Shifts

I go to bed at _____ o'clock. (Image 1)

Note that some people stay awake for some time when in bed ! (Image 2)

I actually get ready to fall asleep at _____ o'clock. (Image 3)

I need _____ minutes to fall asleep. (Image 4)

I wake up at _____ o'clock. (Image 5)

! with alarm ! without alarm

I get up after _____ minutes. (Image 6)

I usually take a nap: ! Yes ! No

If „Yes“: I take a nap from _____ o'clock to _____ o'clock.

There are particular reasons why I **cannot** freely choose my sleep times on night shifts:

Yes ! No !

If “Yes”: Child(ren)/pet(s) ! Hobbies ! Others, for example:



Between two free days after Night Shifts

I go to bed at _____ o'clock. (Image 1)

Note that some people stay awake for some time when in bed ! (Image 2)

I actually get ready to fall asleep at _____ o'clock. (Image 3)

I need _____ minutes to fall asleep. (Image 4)

I wake up at _____ o'clock. (Image 5)

! with alarm ! without alarm

I get up after _____ minutes. (Image 6)

I usually take a nap: ! Yes ! No

If „Yes“: I take a nap from _____ o'clock to _____ o'clock.

There are particular reasons why I **cannot** freely choose my sleep times on free days after night shifts:

Yes ! No !

If “Yes”: Child(ren)/pet(s) ! Hobbies ! Others, for example:

Figure 1. Shift schedule of the actimetry and sleep-log population. Shifts (morning/evening/night) are represented by coded blocks (indicated to the right of the matrix). Note that the last week and the first week are identical, indicating the repetitive succession of shifts (redrawn from Vetter et al., 2012, The Influence of Internal Time, Time Awake, and Sleep Duration on Cognitive Performance in Shiftworkers. Chronobiology International 29: 1127-1138.).

