

Sleep Optimisation — Workbook

This workbook transforms the science you learned in the course into personalised, written protocols you will actually use. Work through each section in order — each exercise builds toward your final sleep protocol document. You will leave with a chronotype-aligned schedule, a step-by-step wind-down routine, an optimised environment checklist, and a 14-day tracking system.

The Biology of Sleep

Anchor your understanding of circadian biology by mapping your personal sleep drivers and calculating your chronotype.

Exercise: Chronotype Calculation Exercise

Over your next two free days (no alarm, no obligations), record your natural sleep times. Then use the MCTQ formula to calculate your chronotype. Do this before reading ahead — your gut estimate is often wrong by 1–2 hours.

- What time did you naturally fall asleep on your first free night, and what time did you wake without an alarm?

- Calculate your free-day sleep midpoint (MSF): $(\text{sleep onset} + \text{wake time}) / 2$. What is your MSF in clock time?

- Based on the population distribution (early: MSF before 2:30 am; intermediate: 2:30–4:30 am; late: after 4:30 am), which chronotype are you? Does this surprise you?

- How many hours per week are you forcing yourself to operate outside your biological sleep window? What is the main constraint causing this mismatch?

Worksheet: Sleep Stage Audit

Reflect on your current sleep patterns and map them against the sleep architecture framework. Be honest — this baseline is your starting point, not a judgement.

Typical sleep onset time (when you actually fall asleep, not when you get into bed)

Typical wake time (alarm or natural)

Total time in bed (hours)

Estimated total sleep time (hours)

Current calculated sleep efficiency % $(\text{sleep time} / \text{time in bed} \times 100)$

Do you wake between 2–4 am? How often per week?

Do you dream vividly and remember dreams? (proxy for adequate REM)

Do you feel physically restored in the morning? (proxy for adequate SWS)

Current caffeine last-use time and approximate mg dose

Current alcohol frequency and typical units per occasion

Checklist: Sleep Myth Busting Checklist

I understand that sleeping in on weekends does NOT repay sleep debt — it shifts my circadian clock later

I understand that alcohol helps me fall asleep but fragments REM in the second half of the night

I understand that 6 hours per night for two weeks produces the same cognitive impairment as 24 hours of no sleep

I understand that my subjective sense of adapting to short sleep does not reflect my actual performance decline

I know my chronotype (early / intermediate / late) and can name the main constraint preventing me from aligning with it

I understand that caffeine does not eliminate adenosine — it only blocks its receptors, deferring the crash

Building Your Sleep Schedule

Set your anchor wake time, calculate your target bedtime, and write your nap and debt-recovery rules as personal policy.

Exercise: Anchor Schedule Design

Design your 7-day sleep schedule using the anchor-wake-time method. Be realistic — your social and work obligations are real constraints. The goal is the most chronotype-aligned schedule that is actually sustainable.

- What is the earliest non-negotiable wake time you have across the week (including weekends)? Write it as your anchor wake time.

- Counting back 7.5 hours from your anchor wake time, what is your minimum target sleep onset? Counting back 8.5 hours, what is your ideal target? Write both.

- What currently happens between 9 pm and your target sleep onset that delays you? List the top three specific barriers (eg: scrolling, TV, social obligations, work).

- Write one if-then implementation intention for your single biggest bedtime delay: "When [cue], I will [sleep-promoting action] instead of [delay behaviour]."

Worksheet: Sleep Debt and Recovery Plan

Estimate your current sleep debt and design a 2-week recovery plan. Use the fields below to structure your plan before filling in the tracking template.

Current workday sleep duration (hours, honest average)

Current free-day sleep duration (hours, honest average)

Estimated daily sleep debt (free-day minus workday duration, hours)

Epworth Sleepiness Scale score (complete at sleepfoundation.org before filling this in)

ESS interpretation: 0–10 normal / 11–15 borderline / 16–24 seek assessment

Proposed new bedtime (anchor wake minus 8 hours) for recovery phase

Date starting recovery phase

Date ending 2-week recovery phase

Morning bright-light strategy during recovery (outdoor walk / lightbox / other)

One person who will hold me accountable to the recovery schedule

Checklist: Schedule Discipline Weekly Checklist

- I held my anchor wake time every day this week, including weekends
- My bedtime varied by no more than 30 minutes across the week
- I avoided sleeping in by more than 30 minutes on any morning
- I did not nap after 3 pm on any day
- Any naps I took were 10–20 minutes and included a timer
- After a poor night I maintained my anchor wake time rather than sleeping in
- I am seeing a trend toward falling asleep within 20 minutes of my target bedtime

Exercise: Nap Policy Decision

Decide whether strategic napping belongs in your personal protocol. Use the prompts below to make an informed decision rather than defaulting to habit.

- What is your current ESS score? If it is above 16, napping is a symptom management tool — not a protocol strategy. If below 10, you likely do not need strategic naps.
 - Does your daily schedule allow a 20-minute rest between 1–3 pm? If yes, describe the specific location and conditions you would use.
 - Will you use the coffee nap technique (200 mg caffeine immediately before the nap)? If so, write your cutoff time to ensure caffeine is cleared before your bedtime.
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The Pre-Sleep Wind-Down Routine

Design your personalised 60-minute wind-down sequence and nutrition rules, written as a step-by-step protocol you can follow without making decisions.

Exercise: Wind-Down Sequence Builder

Build your personal 60-minute wind-down sequence. Fill in the time slots and specific actions below, then transfer it to the Wind-Down Protocol Template spreadsheet. The sequence must be specific enough to follow without thinking.

- T-60 minutes (lights-and-screens): What specific action will you take with overhead lighting and screens at this point? Name the exact app settings, the exact light switch or lamp you will use.
- T-45 minutes (wind-down anchor activity): What single low-stimulation activity will you do during this window — reading, journalling, light stretching, conversation? Be specific. 'Relax' is not a protocol.
- T-30 minutes (screens off): What will you replace screen time with in this window? List two specific alternatives you have actually tried and find calming.

• T-15 minutes (PMR or breathing): Will you use 4-7-8 breathing, progressive muscle relaxation, or both? Describe the exact sequence you will use and how long each step takes.

Worksheet: Evening Nutrition Audit

Map your current evening nutrition habits against the research benchmarks. Use this audit to identify your top one or two nutrition-related sleep disruptors.

Current time of last large meal relative to bedtime (hours before)

Current caffeine cutoff time (clock time)

CYP1A2 metaboliser type (fast / slow / unknown — fast metabolisers tolerate later caffeine)

Alcohol frequency (nights per week)

Typical units of alcohol on a drinking night

Current cutoff time for alcohol (hours before bed)

Do you experience nighttime waking around 2–3 am after alcohol? (yes / no / sometimes)

Do you eat high-sugar snacks within 2 hours of bedtime? (yes / no / sometimes)

Have you tried tart cherry juice or kiwifruit before bed? Result if yes

Current supplement use: melatonin dose and timing / magnesium type and dose

Top 1–2 nutrition changes I will make first based on this audit

Checklist: Evening Protocol Compliance Checklist

- Lights shifted to warm-spectrum 90 minutes before target sleep onset
- All screens off or blue-light filtered 60 minutes before target sleep onset
- Screens fully off 30 minutes before target sleep onset
- No caffeine consumed after my cutoff time today
- No alcohol consumed within 3 hours of bedtime today
- Last large meal was at least 2–3 hours before bedtime
- Wind-down activity completed in the 45-minute window
- PMR or 4-7-8 breathing completed before lights out
- Bedroom temperature set to 16–18°C before getting into bed
- Phone charging outside the bedroom

Sleep Environment Design and Long-Term Tracking

Complete your bedroom environment audit, establish your weekly tracking habit, and write your final personal sleep protocol document.

Worksheet: Sleep Environment Audit

Walk through your actual bedroom and complete this audit honestly. Score each item, then prioritise the two highest-impact changes to make in the next 7 days.

Bedroom temperature at sleep time (measured or estimated, Celsius)

Bedroom temperature target set (yes / no / method: AC / fan / window / none)

Light level at sleep time with curtains closed (completely dark / some glow / significant light sources)

Blackout solution in place (yes / no / type: blackout curtains / sleep mask / both)

Standby LED lights present in bedroom (list each device and whether covered)

Current sound environment (silent / ambient traffic / partner snoring / other)

Sound masking solution in place (yes / no / type: app / machine / earplugs)

Air circulation in bedroom overnight (window cracked / none / HEPA filter)

Bedding material (cotton / synthetic / wool / mixed)

Mattress age and last replacement date

Top 2 environment changes I will make in the next 7 days and estimated cost

Exercise: Personal Sleep Protocol Document

Write your complete personal sleep protocol as a single cohesive document using the prompts below. This is your written policy. Print it or save it somewhere you will see it daily for the first two weeks.

- State your anchor wake time and your target sleep onset time. Then state your wind-down start time (sleep onset minus 60 minutes). Write these as clock times, not durations.

- List every step in your wind-down sequence with its clock time. Include lights, screens, activities, breathing or PMR, and final bedroom preparation. Be specific enough that a stranger could follow it.

- Write your environment checklist: the exact state of your bedroom at sleep time (temperature, blackout status, sound masking, phone location, all LED indicators covered).

- Write your nutrition policy: caffeine cutoff time, alcohol cutoff if applicable, last meal window, and any supplements with dose and timing.

Checklist: Weekly Sleep Review Checklist

- I completed my sleep diary every morning this week within 30 minutes of waking
- I calculated this week's mean sleep efficiency (target: 85%+)
- I identified whether any disruption nights clustered around a specific variable (alcohol / late food / stress / device use / temperature)
- I checked my wearable's total sleep time and nighttime resting heart rate trend, not just sleep stage percentages
- I held my weekly review session (10 minutes, same day and time each week)
- I changed no more than one protocol variable this week so I can isolate its effect
- I am not experiencing orthosomnia (anxiety about sleep scores) — if yes, I will pause wearable tracking for 2 weeks
- My protocol is written and accessible for tomorrow night

Your Action Plan

1. Calculate your chronotype using your next two free-day sleep times (MCTQ method) before making any other changes
2. Set your single anchor wake time and hold it every day for 14 days including weekends — this is the highest-leverage single action
3. Begin the evening light protocol tonight: warm-spectrum lights 90 minutes before bed, screens off or filtered 60 minutes before
4. Set your caffeine cutoff to 2 pm starting tomorrow and record how it affects your sleep onset over the next 7 nights
5. Complete the sleep environment audit this week and implement your top two highest-impact changes within 7 days
6. Start the Consensus Sleep Diary immediately and record every morning — you need 14 days of baseline data
7. Design your personalised 60-minute wind-down sequence and write it as a step-by-step protocol tonight
8. If alcohol is a current habit, experiment with eliminating it for 14 days and compare sleep efficiency before and after
9. Schedule your weekly 10-minute sleep review as a recurring calendar event on the same day each week
10. After 28 days of consistent protocol adherence, reassess your ESS score and mean sleep efficiency. If SE remains below 80%, book a GP referral for a sleep physician assessment or CBT-I

