

# INSOMNIA MANAGEMENT KIT

## Bright Light Therapy

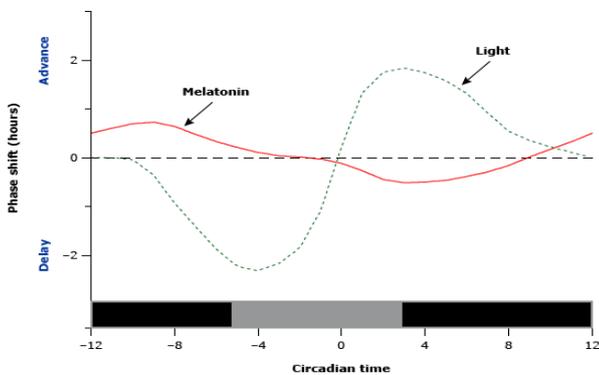
The Insomnia Management Kit is intended to be used in conjunction with your GP. To access further instructions on the use of this fact sheet and other components of the Insomnia Management Kit, go to 'Insomnia management' on the SA Health website: [www.sahealth.sa.gov.au](http://www.sahealth.sa.gov.au).

### The biological clock

All living things have a biological clock that is influenced by the cycle of light and darkness (day and night). In humans, the light enters the retina of the eyes and stimulates nerve impulses that travel along a pathway to the location in the brain (body clock) that governs the circadian rhythms (daily rhythms).

The biological clock controls the timing of our circadian rhythms including our sleep patterns, feelings of alertness and sleepiness, our body temperature, hormonal secretion and body metabolism.

The timing of our circadian rhythm or body clock plays a very important role in the timing of our sleep period. In people with a 'normally' timed body clock, the sleep period occurs sometime between the hours of about 10 pm and 8 am (eg 11 pm – 7 am). However, some people have a later timed body clock (owls) and some may have an earlier timed body clock (larks).



### Delayed Sleep Phase Disorder

People with a later timed body clock (a delayed circadian rhythm) are more evening types. That is, they are more productive in the evening. They tend not to feel sleepy until quite late, and are unable to fall asleep until after midnight. They also have great difficulty waking up in the morning in time for work or school commitments. They sleep-in when they can, especially on weekends. This is called Delayed Sleep Phase Disorder and is commonly experienced by adolescents and young adults.

#### Can the cycle be changed?

YES! It is possible to adjust your circadian rhythm to an earlier schedule through exposure to morning bright light.

### Morning Bright Light Therapy

The aim of this therapy is to re-synchronise your sleep pattern with the day and night cycle – to advance your circadian rhythm to an earlier time.

#### This is what you do...

##### Step 1

Get visual exposure to bright sunlight shortly after sunrise, between the hours of 6am and 9am. Get into a brightly lit environment, but do not look directly at the sun! On a clear sunny day exposure for 20 minutes may be sufficient but generally aim for 30 to 60 minutes. It may be useful to schedule some form of morning exercise (eg walking the dog, gardening), outside in the sunshine. Do not wear sunglasses. However, in winter or inclement weather, an artificial bright light device may be necessary. A commercial light box or lamp with fluorescent globes may be used placed facing you at about arms length.

##### Step 2

Stay in dim light in the evening, while doing some relaxing activity (watching TV, listening to music, reading).

##### Step 3

Maintain a regular wake-up time even on weekends. Do not be tempted to sleep-in. Sleeping in will block morning light exposure and your body clock will again drift to a later time.

#### What will happen?

If you suffer from Delayed Sleep Phase Disorder, then Morning Bright Light Therapy will work for you. Improvement in getting to sleep should occur within two to four days. It is likely you will need to continue this routine for a month to stabilise your new earlier sleep- wake cycle.

### Advanced Sleep Phase Disorder

Some people are 'morning types' and have an earlier timed circadian rhythm. They feel sleepy early in the evening, have little difficulty falling asleep but wake very early in the morning. Their sleep time may be, for example, between 9 pm and 4 am. Many older people report this problem. This is Advanced Sleep Phase Disorder.

#### Can the cycle be changed?

YES! To some extent, it is possible to reverse the effects on sleep through Evening Bright Light Therapy.

## Evening Bright Light Therapy

Exposure to bright light and exercise in the evening delays the circadian rhythm and will allow more sleep in the morning.

This is what you do...

### Step 1

Do something active in the evening – for example, go for a walk or spend time outside in the garden. Keep the lights on in the evening while watching television. During winter, you may need an artificial light device such as a commercial light box or a bright desk lamp placed at about arms length from your face.

### Step 2

Do some light exercise early in the evening such as walking or stretching.

### Step 3

Avoid bright light in the mornings. If you wish to go outside, wear sunglasses for the first couple of hours.

After a week or two you should experience being less sleepy in the early evening and being able to sleep in later in the morning with more total sleep.

Bright Light Therapy is the mainstay treatment for Advanced sleep-wake phase disorder.

Side effects and adverse reactions to light therapy are rare and usually self-limiting. Patients should be informed that eyestrain, nausea, agitation, headache, and hypomania can occur with light treatment.

## For more information

Refer to 'Insomnia management' and 'Sleep problems' on the SA Health website, [www.sahealth.sa.gov.au](http://www.sahealth.sa.gov.au).

Advanced sleep wake phase disorder. K. Sharkey. Uptodate. Dec 2016.

Professor Leon C Lack and Dr Helen Wright, School of Psychology, Flinders University assisted with the information in this resource.

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