



## Health inequalities: Sleep problems

### Introduction

Although there is considerable individual variation in patterns of quantity of sleep, sleep problems can be divided into a number of categories relevant to people with learning disabilities. These include insomnia (including difficulty in dropping off to sleep, waking up frequently in the night, or waking very early in the morning), excessive daytime sleepiness even when apparently sleeping well at night, parasomnias (unusual movements or behaviours such as sleepwalking or sleep paralysis), sleep-related breathing disorders such as sleep apnoea, and circadian rhythm sleep-wake disorders<sup>1</sup>.

For the general population, sleep problems can affect waking hours with signs including tiredness and irritability, and prolonged insufficient sleep has major health consequences in terms of a greater risk of injuries at work, obesity and mortality<sup>2</sup>.

### Prevalence

A meta-analysis of 21 international studies comparing sleep duration and sleep quality amongst people with learning disabilities versus the general population concluded that people with learning disabilities have a shorter sleep time and poorer quality sleep<sup>3</sup>. Participants in the meta-analysis studies were largely drawn from groups of people with learning disabilities with specific genetic syndromes rather than non-specific learning disabilities, potentially limiting generalisability but also highlighting some specific risks for poor sleep amongst people with some specific genetic syndromes.

A systematic review of 50 international studies reported estimated prevalence rates of sleep problems for adults with learning disabilities ranged from 8.5% to 34.1%, with an estimated prevalence rate of 9.2% reported for significant sleep problems<sup>4</sup>.

### Impact on people with learning disabilities

There are very few UK based studies that look at sleep problems and people with learning disabilities. Sleep problems may be seen as an inevitable part of a learning disability and therefore not amenable to intervention<sup>5</sup>. A systematic review of 50 international studies of sleep problems amongst adults with learning disabilities

reported that sleep problems were associated with the following factors: challenging behaviour, respiratory disease, visual impairment, mental health conditions, and the use of psychotropic, antiepileptic and/or antidepressant medication<sup>4</sup>. It is important to note that these associations cannot be interpreted as causal. A further review of international studies reported that individuals with high support needs can present more behaviour that challenges as a result of poor sleep<sup>6</sup>.

### Risk factors

Research indicates that having a genetic syndrome such as Down syndrome appears to increase the likelihood of sleep problems. Obstructive sleep apnoea is more common amongst people with Down syndrome with prevalence rates of between 31-63%<sup>7</sup>, partly due to conditions related to sleep apnoea in the general population such as obesity and hypothyroidism which are more common for people with Down syndrome<sup>7</sup>. Other specific syndromes are also likely to confer additional risks for different types of sleep disorder<sup>1 8</sup>.

### Healthcare and treatment

It is important to note that for many people with learning disabilities poor sleep may be a function of a painful health condition, which with assessment and treatment may remove the need for other interventions for sleep problems<sup>1</sup>. It is also important to note that people with different genetic syndromes may have different profiles of sleep problems requiring different types of intervention<sup>8</sup>.

Treatments for sleep problems are usually behavioural and concentrate on establishing a good bedtime routine and good sleep hygiene. Behavioural interventions were found to be helpful in a meta-analysis of international studies looking at children and adolescents with learning disabilities<sup>9</sup>, with parent training as part of intervention to improve children's sleep also showing promise<sup>10</sup>. However, there have been no high quality studies looking at behavioural interventions with adults with learning disabilities<sup>6</sup>.

Treatment for insomnia can include use of melatonin, a medication that mimics a naturally occurring hormone that the body releases when people start to feel tired. Although melatonin has been shown to be effective in helping people with learning disabilities get to sleep, studies have also indicated a small number of cases of potential agitation, aggression and restlessness<sup>6</sup>.

### Social determinants

There does not appear to be any research concerning social determinants of sleep problems amongst people with learning disabilities, and social determinants associated with poorer sleep in the general population such as living in a

disadvantaged neighbourhood, children living in families where parents have fewer resources, and screen usage<sup>11</sup> need to be investigated for their relevance to people with learning disabilities.

## Resources

Cerebra (2017) [Sleep: A Guide for Parents](#)

## References

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<sup>1</sup> Cerebra (2017) [Sleep: A Guide for Parents](#)

<sup>2</sup> Public Health England (2018) [Public health matters: Making the business case for sleep](#)

<sup>3</sup> Surtees A, Oliver C, Jones C and others (2018) Sleep duration and sleep quality in people with and without intellectual disability: A meta-analysis. *Sleep Medicine Reviews*, 40, 135-150

<sup>4</sup> Van de Wouw E, Evenhuis HM and Echteld MA (2012) Prevalence, associated factors and treatment of sleep problems in adults with intellectual disability: A systematic review. *Research in Developmental Disabilities*, 33(4), 1310-1332

<sup>5</sup> Priday LJ, Byrne C and Totsika V (2017) Behavioural interventions for sleep problems in people with an intellectual disability: a systematic review and meta-analysis of single case and group studies. *Journal of Intellectual Disability Research*, 61: 1– 15. doi: 10.1111/jir.12265

<sup>6</sup> Shanahan P, Palod S, Smith K and others (2019) Interventions for sleep difficulties in adults with an intellectual disability: A systematic review. *Journal of Intellectual Disability Research*, 63(5), 372-385.

<sup>7</sup> Esbensen A (2016). Sleep problems and associated comorbidities among adults with Down syndrome. *Journal of Intellectual Disability Research*, 60(1), 68-79

<sup>8</sup> Trickett J, Heald M, Oliver C and Richards C (2018) A cross-syndrome cohort comparison of sleep disturbance in children with Smith-Magenis syndrome, Angelman syndrome, autism spectrum disorder and tuberous sclerosis complex. *Journal of Neurodevelopmental Disorders*, 10:9

<sup>9</sup> Turk J (2010) Sleep disorders in children and adolescents with learning disabilities and their management. *Advances in Mental Health and Learning Disabilities*, 4(1), 50-59

<sup>10</sup> Kirkpatrick B, Louw JS and Leader G (2019) Efficacy of parent training incorporated in behavioral sleep interventions for children with autism spectrum disorder and/or intellectual disabilities: a systematic review. *Sleep Medicine*, 53(1), 141-152

<sup>11</sup> Hale L, Emanuele E and James S (2015). Recent updates in the social and environmental determinants of sleep health. *Current Sleep Medicine Reports*, 1(4), 212-217