

QUESTION 2

Do weighted blankets improve sleep in children with an autistic spectrum disorder?

SCENARIO

In community paediatric outpatient clinics, several parents have asked you about the use of weighted blankets to help their children with autistic spectrum disorder (ASD) get to sleep. Weighted blankets had been recommended by the local ASD support group and the parents wanted to know if you thought they were worth buying.

STRUCTURED CLINICAL QUESTION

In a child with autism (patient) do 'weighted blankets' (intervention) have any positive effect on sleep (outcome)?

SEARCH STRATEGY AND OUTCOME

The search was done in June 2013.

SECONDARY SOURCES

Cochrane Database yielded no results.

PRIMARY SOURCES

A search of MEDLINE using 'weighted blanket' OR 'weighted vest' OR 'pressure vest' AND 'autistic spectrum disorder' yielded 11 results, of which 0 were relevant.

A search of MEDLINE using 'weighted blanket' OR 'weighted vest' OR 'pressure vest' AND 'sleep' yielded 0 results.

A search of CINAHL using 'weighted blanket' OR "weighted vest" OR 'pressure vest' AND 'autistic spectrum disorder' yielded 11 results, of which 0 were relevant.

A search of CINAHL using 'weighted blanket' OR 'weighted vest' OR 'pressure vest' AND 'sleep' yielded 0 results.

COMMENTARY

Weighted blankets and vests work on a principle of providing proprioceptive deep pressure. This in turn promotes the production of neurotransmitters such as serotonin and dopamine, which modulate the central nervous system and increases parasympathetic tone. This is felt to result in changes to how children process sensory information and can be observed as reduced anxiety and overarousal.

Children with ASD frequently have sleep problems and this may have an impact on them and their families. However, we could not find any published research supporting the use of weighted blankets in these children. Despite this apparent lack of evidence, many support groups/websites are advocating their use, for example, the National Autistic Society¹ state on their website, "Some children respond well to a weighted blanket, which is

made from thick blanket material like a quilt with pockets filled with beans instead of hollowfibre. The pressure of the blanket can be reassuring and it works on the same principle as the 'squeeze machine' which Temple Grandin invented to help her learn to cope with touch." On 'ASD forums' many comment on their use of weighted blankets in sleep disorders "my son is sleeping better with his and we have reduced his sleeping medication"² and many websites selling weighted blankets display testimonials such as "I will quote our 4 year old boy who has high functioning autism—"Wow! That's amazing, I love it"³ and "My son seems to respond really well to the deep pressure."³

We found one published report following the death of a young autistic boy in Canada highlighting potential safety issues, particularly if weighted blankets are not used appropriately. The report identified a lack of reliable evidence for both efficacy and safety of weighted blankets and vests for children with ASD.⁴

There are a few small studies looking at the use of weighted vests and their effect on attention to task in children with an ASD. These studies generally found that the weighted vests did not improve attention to task.⁵⁻⁷ Only one study reported an increase in attention to task and decrease in self-stimulatory behaviours in five preschool children with ASD when wearing a weighted vest compared with when the vest was removed.⁸ However, a survey of American occupational therapists found that 92.2% recommended the use of weighted vests for children with ASD and about 70% reported seeing improvements in attention to task which they felt was attributable to the vests.⁹

It is clear that a well-powered randomised trial is needed to identify the efficacy and safety of the use of weighted items for autistic children. We believe that a UK-based randomised cross-over study is in progress at three participating centres—the Evelina Children's Hospital, Oxford Brookes University and Lime Trees Child and Family Unit—looking at effects of weighted blankets on sleep¹⁰ and we await the results of this study with interest. In the meantime we would recommend that when clinicians are asked about the use of weighted blankets and vests they should be aware that their safety and efficacy have not been proven and ensure that parents are told this.

Clinical bottom line

- ▶ There is no good evidence that weighted blankets or vests have any positive outcome on sleep or attention to task in children with autism and their safety in this population has not been established.
- ▶ Despite this many ASD forums and support groups recommend their use and they are widely used in America.
- ▶ While awaiting further study, clinicians should ensure they make parents aware of this lack of evidence of efficacy and safety of weighted blankets when asked for their opinion.

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REFERENCES

- 1 National Autistic Society. Sleep and autism: helping your child. 2013. [online] <http://www.autism.org.uk/living-with-autism/understanding-behaviour/sleep-and-autism-helping-your-child.aspx> (accessed 14 Jul 2013).
- 2 Anon. Aspergers and ASD online UK forum: Weighted Blankets. 2008. [online] <http://www.asd-forum.org.uk/forum/index.php?topic/6373-weighted-blankets/> (accessed 14 Jul 2013).
- 3 Anon. Weight-2-Go Blankets. 2007. [online] <http://www.weight2goblankets.co.uk/5.html> (accessed 14 Jul 2013).
- 4 AETMIS. Summary: Weighted blankets and vests: safety, efficacy and issues related to their use in different intervention settings. 2009. [online] http://www.inesss.qc.ca/fileadmin/doc/AETMIS/Rapports/ServicesSociaux/2010_04_res_en.pdf (accessed 14 Jul 2013).
- 5 Hodgetts S, Magill-Evans J, Masiaszek J. Weighted vests, stereotyped behaviours and arousal in children with autism. *J Autism Dev Disord* 2011;**41**:805–14.
- 6 Leew S, Stein N, Gibbard W. Weighted vests' effect on social attention for toddlers with autism spectrum disorders. *Can J Occup Ther* 2011;**77**:113–24.
- 7 Collins A, Dworkins R. Pilot study of the effectiveness of weighted vests. *Am J Occup Ther* 2011;**65**:688–94.
- 8 Fertel-Daly D, Bedwell G, Hinojosa J. Effects of a weighted vest on attention to task and self-stimulatory behaviours in preschoolers with pervasive developmental disorders. *Am J Occup Ther* 2001;**55**:629–40.
- 9 Olson LJ, Moulton HJ. Occupational therapists' reported experiences using weighted vests with children with specific developmental disorders. *Occup Ther Int* 2004;**11**:52–66.
- 10 UK Clinical Research Network. Snuggledown—the use of sensory weighted blankets in children with autistic spectrum disorders and poor sleep: a randomised crossover study. 2012. [online] <http://public.ukcrn.org.uk/search/StudyDetail.aspx?StudyID=10090> (accessed 14 Jul 2013).



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