



## Safe use of Weighted Blankets (for Children and Adults)

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### 1. Introduction

This briefing has been developed by the Royal College of Occupational Therapists in consultation with the Sensory Integration Network (UK and Ireland) and with members of the Royal College of Occupational Therapists Specialist Section for Children, Young People and Families. It aims to provide guidance for occupational therapists that use and/or recommend weighted blankets for their clients. This briefing does not offer support or otherwise for the use of Sensory Integration as an intervention, for use of weighted blankets as part of Sensory Integration treatment or incorporating sensory needs into daily routine. It does however aim to inform those using weighted blankets (or covers) as part of an occupational therapy programme, using Sensory Integration as a tool to achieve sensory regulation to support engagement and occupational performance.

#### 1.1 Background

In Canada in 2008, 9-year-old Gabriel Poirier 'died of suffocation under a weighted blanket in which he had been rolled by his teacher at the special school he attended'. He was left without supervision for 20 minutes and the instructions given to the special education worker and teacher by the occupational therapist were not followed (OEQ 2008).

#### 1.2 Sensory Integration

The use of equipment such as weighted blankets has developed from the theories and practice of Sensory Integration (SI). SI was defined by Jean Ayres, its founder, as 'the neurological process that organises sensation from one's own body and from the environment and makes it possible to use the body effectively within the environment' (Ayres 1970). SI offers a theory of brain behaviour relationship, a model of assessment and a model of intervention. A dysfunction in an individual's sensory integration (DSI), or sensory processing disorder (SPD), as it is often known, may be the cause of difficulties for children who find themselves unable to easily learn new skills, to pay attention, to co-ordinate movements or to cope with social participation. Intervention may be direct, meeting the recent criteria for fidelity (Parham et al 2007), or indirect, taking a consultative approach, reframing behaviours and developing new strategies (Bundy 2002). Schaaf and Smith Rowley (2006) identify the need to incorporate sensory needs into daily routine.

Neuroscience literature identifies the use of active sensory experiences to enhance sensory regulation as a basis for learning, brain maturation and neural organisation. Deep pressure touch externally supplied is passive application of a sensory stimulus, whereas self-initiated movement against resistance or weight provides active sensory rich experience. Passive application of sensory stimulation is rarely justified unless the clinician uses extreme caution and care (Dahl Reeves 2001).

#### 1.3 Weighted blankets

Weighted blankets, also referred to as weighted covers, can be used for children, young people and adults with sensory processing difficulties to assist with self-calming and sensory regulation.



The rationale for the use of weighted blankets is linked to the impact of deep pressure touch on arousal (Lane 2002). Weighted blankets offer deep pressure touch to the body giving a feeling of being hugged, held or cuddled (Grandin 1992). Some limited evidence regarding the beneficial effects of weighted blankets is available (Mullen 2008)<sup>1</sup>, but this was undertaken with healthy adults so cannot be generalised to apply to children with or without disabilities or to adults with learning disabilities. However, there is significant anecdotal evidence from occupational therapists, parents and teachers of the calming effects of sensory 'tools' including weighted blankets.

Touch receptors in the skin are activated when stimulus are applied and then when stimuli are removed. When stimuli are applied and left in place there is a diminishing response or adaptation over time. Therefore it is thought that weighted items are most effective over shorter periods of time when the client is not moving and for longer periods of use only when the client is moving. When the client is moving/active or providing some resistance there is an increase in active proprioception rather than the more passive pathway of deep pressure touch.

Weighted blankets can be a useful tool but will not be the sole solution for meeting client's sensory needs; there are alternative methods that can assist with self-calming which could be trialled first and always used in the event of any safety concerns. For further suggestions see Schaaf and Smith Rowley (2006, chapter 13). One of the components of SI is to tap the client's inner drive and support client activity. It is important that sensory activities are not imposed.

## **2. Safe use of weighted blankets as part of direct occupational therapy intervention**

The use of weighted blankets can be part of an occupational therapy treatment or used to incorporate sensory needs into daily routine (Schaaf and Smith Rowley 2006). The assessment of need and subsequent clinical reasoning will determine which is appropriate.

### **2.1 Assessment**

Occupational therapists should undertake a comprehensive assessment of their client and be able to justify the use of any chosen treatment approach.

Assessment should include:

- Occupational and functional abilities and needs in the relevant contexts;
- Health condition and physical strength, size and weight;
- Relevant risk assessments (see Contraindications 2.2);
- Sensory processing.

### **2.2 Contraindications**

The occupational therapist should determine if their client's health contradicts in any way the use of the blanket, with reference to any condition including :

- Respiratory problems (consider use below the torso);

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<sup>1</sup> Mullen et al (2008) evaluated the safety and effectiveness of a weighted blanket with 32 volunteer adults. The results of this study showed that the use of weighted blankets did not generally cause unsafe physiological reaction. The authors therefore concluded that weighted blankets were safe. They found 33% of the sample group demonstrated lower electro-dermal activity (EDA) and 63% had a demonstrated reduced anxiety. In a self-reporting questionnaire, 78% reported that they felt more relaxed when using the blanket than without it. The group also showed some physiological change and reported reduction in anxiety when lying down without the weighted blanket, to the point that the authors acknowledge the beneficial effect of lying down (in a quiet room).



- Cardiac problems;
- Epilepsy (ensure epilepsy is controlled);
- Serious hypotonia;
- Skin problems, including certain allergies;
- Circulatory problems (OEQ 2008);
- They should also assess whether the client is unable to remove blanket independently.

## 2.3 Record keeping

Please refer to *Keeping Records* (RCOT 2018) and College of Occupational Therapists, *Professional Standards for Occupational Therapy Practice*, (COT 2017, section 7), for full details of standards regarding record keeping.

As with all occupational therapy practice, all contacts, advice and interventions must be recorded. 'If it is not included, it has not been done, has not been considered or was not said.' (Lynch 2009 p50). Your records should provide a comprehensive and accurate account of service plan and provision (COT 2017, Section 7). It is also required that consent for the specific intervention is detailed including the form in which the consent was given and by whom.

## 2.4 Consent

Please refer to the *Code of Ethics and Professional Conduct* (2015) for full details regarding consent.

Consent to generic occupational therapy input is not sufficient. Occupational therapists should also ensure that the client is fully informed about the specific nature of the interventions relevant to them.

## 2.5 Impaired capacity

Occupational therapy staff should be aware of the correct legal approach to take when obtaining consent is difficult or not possible.

**Adults** - For adults with impaired capacity, the occupational therapist needs to ensure that they always act in the best interests of the client. (COT 2015).

**Children and young people** - A child must also consent to the use of the weighted blanket if possible, even though they are a minor.

## Review

The success of the intervention will be judged by a client's responses and reactions and so it is important to listen to the information your client is providing. Use of any programme should be part of identified goals and outcomes reviewed at agreed intervals and documented clearly in client notes.

## 3. Safe use of weighted blankets - checklist

### 3.1 Weighted blankets can be a safety risk in not used correctly

#### Recommendations for safe use:

- The client's head and neck must not be covered.
- The client's vital signs should be observable at all times.
- The client must not be rolled in the blanket; it should be placed over them. If in a bed it should not be draped over the sides of the bed (see use at night time/ for sleeping (see 4.5)).
- The client must be able to remove the blanket or get free of the blanket by themselves. When trying out a weighted blanket for the first time, ensure clients are able to physically manoeuvre the blanket



with confidence. Remind the client using the blanket that they can take it off at any time, if it feels uncomfortable, too hot or heavy etc.

- The client must be supervised at all times when under the blanket. When it is used for the first time or as part of a direct occupational therapy treatment this must be by a therapist able to interpret the user's reaction and response, in order to ensure it is the right tool to meet the needs of the client.
- When a blanket is given as part of a sensory diet the care giver must receive training for that specific client and understand the safety guidelines (see section 4).
- The weighted blanket must never be used as a restraint.
- Manufacturer's instructions on the recommended use of the equipment should be followed as a minimum standard. All non-compliant use should be justifiable. Many manufacturers provide limited guidance and it is likely that the recommendations provided will be superseded by the checklist above. None the less if guidelines are provided they should be followed.

### 3.2 Observations during use

Watch for any negative reactions shown by the client when under the blanket. These could include:

- Difficulty breathing
- Nausea
- Increase in temperature
- Any behavioral or physical reactions demonstrating the client's discomfort or anxiety

### 3.3 Assessing safe weight

At the time of writing, there is no evidence specifying the required weight of a weighted blanket in relation to the client's body size and weight. However, good practice suggests that the blanket should be as light weight as possible, while still achieving any agreed outcomes.

The Ordre des Ergotherapeutes du Quebec (OEQ) state the weight and size of the blanket should correspond to the client's physical features and recommend a ratio of 10% of the client's weight as the blanket's maximum weight. For example:

- 100 pound person should use a blanket that is no more than 10 pounds in weight.
- Clients who weigh around 40 pounds should use a blanket that weighs four pounds or less
- A 9 pound blanket is for clients who weigh 90 pounds or more (6st 6 lb) (OEQ 2008).

Weighted blankets should be individually recommended on a client by client basis. This should be particularly stressed in a school environment to ensure that blankets are not swapped between varying children.

### 3.4 Duration of use

Guidelines from OEQ and the State of Quebec Coroner state the blanket is to be used for no longer than 20 minutes (unless there are exceptional reasons). The reasons for this are not given. This would prohibit lengthy night time use. If the blanket is used for longer periods, close justification must be recorded and close observation is recommended. (See 4.5 – night time use and sleeping).

### 3.5 Fabrication

There is no evidence about use of materials and size, but common sense indicates attention should be given to the client's size, any health needs, e.g. allergies, and the environment where the blanket will be used. Personal considerations might also need to be factored in e.g. they may prefer a smaller or lighter blanket.



## 4. Guidance for the safe use of weighted blankets as part of an occupational therapy programme given to parents, teachers or other care givers

Weighted blankets are often used to incorporate sensory needs into a daily routine.

### 4.1 Assessment

Assessment will be very similar to that undertaken for direct occupational therapy intervention and should include:

- Occupational and functional abilities and needs;
- Health condition and physical strength, size and weight;
- Relevant risk assessments;
- Sensory processing;
- Carer's abilities and needs;
- Environmental factors.

### 4.2 Provision

The occupational therapist should demonstrate in person, explain the safety checklist and ask the care giver to sign an agreement of demonstration and checklist. This process should then be fully documented in the client notes. The provision of a weighted blanket is to be documented as part of the client's goals and interventions with a planned time for review (COT 2017).

When demonstrating the use of a weighted blanket occupational therapists should communicate effectively so that everyone who uses a weighted blanket is aware of and agree to follow the safety guidelines above and the intervention plan designed for the client.

Occupational Therapists should:

- Provide training to users of weighted blankets based on the checklist for safe use and the client's individual needs and circumstances.
- Provide the above checklist information verbally during demonstration and in written form.
- Provide written information regarding:
  1. General guidance for the safe use of weighted blankets.
  2. Specific information and instructions for individual clients linked to their intervention / care plans.
  3. Instructions to follow if any problems arise e.g. remove the blanket and stop using, contact emergency help if the client experiences breathing difficulties, or contact the occupational therapist if the client has any behavioural difficulties.
- Ideally regular training and follow-up should be provided in order to maintain continued, up-to-date knowledge and skills both about the use of weighted blankets and in relation to meeting individual client's needs. If this is not possible or inconsistent with department models, occupational therapists should assure themselves that those using the blanket are aware to contact the occupational therapist should an individual's needs change or a review of the blanket is required.

### 4.3 Review

Weighted blankets are an item of equipment, used within the framework of an intervention or care plan in order to meet specific objectives. These objectives should ideally be regularly reviewed in order to evaluate outcomes and in particular, the continued benefits and use of a weighted blanket (see 4.2).

### 4.4 Learning to use a weighted blanket more independently

Older children/adults may benefit from being encouraged to use their weighted blanket as and when they require it as a self-calming strategy and, in the longer term, a coping strategy.





In these situations a risk assessment should be undertaken covering the guidance above, particularly with respect to the client's ability to:

- move around under the blanket;
- be able to remove the blanket independently; and
- be able to understand and follow guidance for safe use and to self supervise their health needs.

#### **4.5 Use of weighted blankets at night and for sleeping**

Given the maximum duration for use guidelines issues by the Canadian Coroner (20 minutes), occupational therapists are advised not to recommend blankets for prolonged use. The advice also states that users should be supervised so this would preclude extensive use at night. Parents/carers may choose to ignore this advice. Occupational therapists are advised to explain the risks and contraindications to parents if they are aware they are acting against this advice and to document this discussion thoroughly.

Before considering brief use of a weighted blanket at night, ensure all other alternatives have been explored first. If a weighted blanket is to be used at night or for sleeping during the day, a risk assessment is recommended and, as well as the guidance above, further consideration should be given to the following:

- It is important that the client can move around by themselves under the weighted blanket and be able to remove the blanket easily.
- Always remind the client that they can remove the blanket at any time if it is feeling too heavy or hot.
- It is recommended that the blanket should be removed once the client has fallen asleep so that it is not in place all night.
- Ensure the blanket fits on the top of the mattress without hanging over the sides of the bed.
- The blanket should only be used under supervision and if parents/carers plan to use without supervision at night it is recommended that carers check on the client while they are sleeping.

#### **4.6 Looking after a Weighted Blanket**

Always follow the manufacturer's instructions for using and caring for weighted blankets. Every time it is used, check it for damage such as loose stitching or ripped seams. If it is damaged, stop using it until it is repaired or replaced.

#### **5. Issuing guidance when a weighted blanket has been purchased independently**

If a weighted blanket has been purchased for use at home or school without the recommendation of an occupational therapist it is good practice to advise on safe use, particularly if there is an open duty of care for that client. The above information should form a basis for this. However, the full duties above only apply if the blanket has been issued by an occupational therapist or specifically recommended.

#### **Acknowledgement**

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