

Silk garments for eczema/atopic dermatitis

Device name and manufacturer

Three brands of knitted silk garments are currently listed in the Drug Tariff, these are DermaSilk[®], DreamSkin[®] and Skinnies[™] silk.^{1,2,3} All three brands have a wide range, from eye masks, socks and gloves to vests, pyjamas and body suits. Sizes of garments range from those suitable for babies and children to full size adult clothing. All three brands of garments contain medical grade silk that has been treated to remove the natural gum (sericin) which can be allergenic. The fibre is then coated with an antibacterial (DermaSilk[®], Skinnies[™] silk) or a polymer (DreamSkin[®]). The manufacturers say that silk clothing is less irritant than standard cotton clothing, protects the skin from moisture loss while remaining 'breathable' and may reduce excessive sweating.^{1,2,3}

What is the evidence for effectiveness?

Published trials so far have been small and limited to infants and children. The largest of these recruited 46 children with atopic dermatitis aged from 2 months to 10 years; 31 of these were allocated to use of silk clothing (DermaSilk[®]) continuously for 7 days, the other participants wore cotton clothing.⁴ Topical emollients were the only treatments allowed. Severity of symptoms was scored using a clinically validated scoring system ('SCORAD' index) by an investigator blinded to clothing type in each patient.⁵ At the end of the 7 days the score for those using the silk garments had fallen from 43 to 30 (30% reduction, P = 0.003), compared with a 2% reduction in the control group. They also found a statistically significant reduction in severity score for a localised area covered by silk clothing compared with another area left uncovered during the trial (baseline score 32 reduced to 18.6 (42% reduction, P = 0.001) in the silk group compared with a reduction of 31 to 26 (16% reduction, P = 0.112) in the control group.⁴

NICE guidance on treatment of atopic eczema in children (2007) made no recommendations about the use of such garments in the management of eczema, though they included this study in their review.⁶

A systematic review of silk garments in atopic dermatitis in 2012 concluded that the evidence of effectiveness is weak and of low quality.⁷ A long term trial of silk therapeutic clothing for the management of eczema in children in the UK which includes an estimate of cost-effectiveness is due to report in 2016.⁸

Costs

The following prices are from the Drug Tariff (June 2014), rounded to nearest £ for clarity, over a range of sizes and types of garment. Retail cost is higher (see manufacturers' websites). It is currently unclear how long garments would last, though manufacturers' websites say they can be washed repeatedly. Patients would probably need two sets of garments to allow for washing.

	Pair of gloves	Bodysuit	Pyjamas (1 set)	Leggings
DermaSilk [®]	£14 - £20	£37 - £42	£70 - £81	£27 - £78
DreamSkin [®]	£14 - £20	£35 - £40	£67 - £77	£25 (baby) - £76
Skinnies [™]	£13 - £19	£35 - £38 (baby only)	£69 - £146 (top + legging)	£25 - £74

Conclusion

There is currently only poor evidence from published trials to support prescribing of silk garments in children or adults with atopic dermatitis/eczema.

References

1. DermaSilk[®] manufacturers website, at www.dermasilk.co.uk, accessed June 2014
2. DreamSkin[®] manufacturers website, at www.dreamskinhealth.co.uk, accessed June 2014
3. Skinnies[™] silk: manufacturers website, accessed via www.skinniesuk.com, accessed June 2014
4. Ricci G, Patrizi A *et al.* Clinical effectiveness of a silk fabric in the treatment of atopic dermatitis. *Br J Dermatol* 2004; 150: 127-31
5. European Task Force on atopic Dermatitis Clinical validation for SCORAD system. *Dermatology*. 1997;195(1):1-9
6. NICE guidance, 2007. Atopic eczema in children, accessed via <http://www.nice.org.uk/guidance/cg57/resources/cg57-atopic-eczema-in-children-full-guideline>, June 2014
7. Lopes C, Silva D, Delgado L *et al.* Functional textiles for atopic dermatitis: a systematic review and meta-analysis. *Pediatr Allergy Immunol* 2013; 24:603-13. <http://www.ncbi.nlm.nih.gov/pubmed/23980847>
8. Randomised controlled trial of silk therapeutic clothing for the long-term management of eczema in children (CLOTHES trial), accessed via <http://www.crd.york.ac.uk/crdweb/ShowRecord.asp?LinkFrom=OAI&ID=32013000947>, June 2014.

