

Of mites and men: Ineffective interventions against house dust mites, institutional corruption and Cochrane fraud

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Some people with asthma are allergic to house dust mites, and many physical and chemical methods have been tried to eradicate the mites or reduce their occurrence. One of my researchers, Cecilia Hammarquist from Sweden, wanted to review the trials, which we did.

This is a hilarious story illustrating that there are no limits to stupidity and dishonesty in healthcare.

None of the interventions had any effect,¹ but our results were not welcomed. We had studied the trials carefully and were a strong team of people, including a lung specialist who had done more trials in this area than anyone else. But when we submitted our Cochrane review to the Cochrane Airways Group, its editor, Paul Jones, said he needed total certainty that our data extraction was correct. He asked us to review all the trials again, and we even had to go to the group's office in London to work there while "consulting" the editorial staff, as it was called.

This extra work was a waste of time that did not change our results, but it delayed publication of our review considerably, which was intended. I learned later that, in the meantime, an application for yet another trial, similar to many of those we had reviewed, only much larger, had been granted public funding amounting to £728,678. If our review had been out, the trial would likely not have been funded.

This was institutional corruption in Cochrane.² And it became worse. After we had agreed on a version for publication in 1998, Jones secretly changed our abstract. We incidentally detected this and complained about it. Some years later, when we updated the review with new trials, Jones changed our abstract again - and again without our knowledge or permission. This was serious editorial misconduct.

Our conclusion was that the interventions "seem to be ineffective and cannot be recommended."³ Jones changed this into, "There is not enough evidence to show" that the interventions were effective. This was called "Reviewers' conclusions," which was false. And to say that "there is not enough evidence" suggests that if we could have included the large UK trial, we might have shown that the methods worked.

It was fraud. We had shown, with narrow confidence intervals, that we could not have missed a worthwhile effect. In our most recent update of the review, from 2008, there is still no trace of an effect, and the large UK trial made no difference to our results whatsoever,⁴ which I, with my statistical background, *knew* would be the case.

In 2007, the editor of *Allergy* had become so tired of specialists routinely turning a blind eye to our review when recommending useless interventions against mites that he asked us to publish it in his journal, which we did.⁵ He was particularly concerned about the new asthma guidelines published by the US National Institutes of Health.⁶ An editorial in *The Lancet* called them “rigorous and evidence-based,” but we explained that this was not correct for the house dust mite recommendations.⁷

The guidelines filled 440 pages. An expert panel recommended mattress covers quoting an editorial, a non-systematic review, a before/after study with no control group, a study about rhinitis, and a study we excluded from our review because there were no outcome data for patients who were allergic to mites. One study was irrelevant because it involved multiple interventions and allergens. What remained were five trials, which did not show an effect of mattress covers. In contrast, we had 26 trials of mattress encasings in our review.

The eminences said nothing about our review, which was widely known and had been published in the *BMJ* nine years earlier.⁸ Amazingly, this garbage came from the NIH.

In our *Allergy* paper, we mentioned a 2008 consensus report written by expert teams from two European academies.⁹ It listed impermeable mattress, pillow and quilt covers, which was misleading because the text didn’t say they don’t work. The guidelines were described in *JAMA* as being evidence-based, and one of the authors said: “We tried very hard to make these recommendations evidence-based and tried to avoid expert opinion as the basis for recommendations.”¹⁰

I noted in a letter to *JAMA* that the experts had not tried hard enough because the three references offered in support of their recommendations were irrelevant. I also wrote that we found that the average effect of the interventions on the peak expiratory flow rate (the most common outcome in asthma trials) was exactly zero, with a very narrow confidence interval. *JAMA* refused to publish my letter. Institutional corruption again.

Patients have been lured into accepting highly expensive super-vacuum cleaners, mattress covers, obsessive cleaning, air filters and throwing out carpets. On top of this, allergy experts must know the interventions *cannot* work (see below).

We were so appalled that we did a study showing how misleading narrative reviews are. Inspired by John Steinbeck’s novel, *Of mice and men*, we called our paper, *Of mites and men*.¹¹ We found that 90% of the 70 reviews we included recommended physical interventions, with a highly selected and biased sample of references in support of this. The most quoted trial had only 7 patients per group; its significant result seemed to be erroneous; and it was not a clinical outcome. The recommendations were often based on non-randomised studies, and the most quoted study had only 10 patients per group, yet claimed very positive results. In contrast, we had 54 trials and 3002 patients in our review.

In 2013, a survey showed that most Italian paediatricians recommend mattress covers, weekly washings at high temperatures, special vacuum cleaners and removing carpets.¹² The authors presented unwarranted criticism of our review and concluded that the best strategy was to implement all preventive measures. They acknowledged that it is impossible

to eradicate the mites because they invade houses from the environment.¹³ Yet, this had no impact on their recommendations.

I went on the Internet to see if it was equally bad elsewhere. The text from the famous Mayo Clinic in the USA, which was from 2021, was dishonest:¹⁴ “When you minimize your exposure to dust mites, you can expect fewer or less severe allergic reactions.” And the authors recommended even more futile interventions than the Italian doctors. There were no references, which means no accountability.

The UK charity *Asthma + lung UK* also failed miserably.¹⁵ It had similar recommendations as the Mayo Clinic plus an odd one: “open your windows regularly,” which will ensure that more mites will enter the house!

Paediatrician Jesper Brandt Andersen was highly critical when the Danish Appeals Board in 2009 overturned a decision about paying for a mattress cover for one of his patients. He called the decision grotesque and wrote an article about it in our medical journal.¹⁶

I replied that the Appeals Board based its decision on our Cochrane review after having obtained an opinion from the Board of Health, which continued to recommend mattress covers and said it was in dialogue with “doctors with great expertise in this area.”¹⁷ In the Board’s 94-page handbook on allergic disorders, there was no reference to our Cochrane review, only to a small Danish trial with 47 patients, which did not find any effect on the asthma symptoms. I noted that “doctors with great expertise,” both at home and abroad, had now had 11 years to think about our review, but this had not changed anything.

My attempt at bringing a little reason into the debate angered Andersen who wrote a new article that was full of untenable arguments and misquotations, and where he even claimed that our Cochrane review was not evidence-based medicine!¹⁸

The fact is that the reduction in allergens that can be obtained is far too small to be effective, and there are lots of mites in the environment that continue coming into the house. In 2010, experts on mites said in an interview that encasing mattresses could not work and explained that there are extremely few mites in the mattress compared to the rest of the house.¹⁹ One of them noted that wrapping the mattress in allergen-proof mattress covers can best be compared to emptying the Atlantic Ocean with a teaspoon.

However, in the same article, allergy specialist Holger Mosbech recommended mattress covers and tried to argue that there was something wrong with our Cochrane review, which was a logical fallacy because, if he was right, this would not prove that mattress covers are effective. The Board of Health announced that they would look at the evidence again, not because of our Cochrane review, but because the Appeals Board had decided against them.

The Board also said that there was no reason to change its recommendations of using mattress covers and that there is “no need to doubt the Board of Health's professionalism, or to doubt that the Board uses the best possible evidence.”²⁰

What a joke. The Board never changed its recommendations. In 2018, they wrote that “improved asthma control may be achieved if house dust mite-reducing measures are used in the bedroom,”²¹ quoting a 2015 guideline, which said that using allergen-proof mattress covers may reduce the patient's contact with mite allergens.²² In 2023, the Board claimed that exposure to house dust mites can be significantly reduced.²³

In 2022, Mosbech recommended, on our official website for patients, to remove the carpets and use mattress covers.²⁴

I have often wondered why massive stupidity and dishonesty in healthcare is so common and just continues, despite overwhelming evidence that the beliefs are wrong. What decides what gets used in healthcare can be spelled with five characters: POWER or MONEY, which is about the same.

¹ Gøtzsche PC, Hammarquist C, Burr M. House dust mite control measures in the management of asthma: meta-analysis. *BMJ* 1998;317:1105-10.

² Whitaker R, Cosgrove L. *Psychiatry under the influence: institutional corruption, social injury, and prescriptions for reform*. New York: Palgrave Macmillan; 2015.

³ Gøtzsche PC. *Survival in an overmedicated world: look up the evidence yourself*. Copenhagen: People's Press; 2019, page 22.

⁴ Gøtzsche PC, Johansen HK. House dust mite control measures for asthma. *Cochrane Database Syst Rev* 2008;2:CD001187.

⁵ Gøtzsche PC, Johansen HK. House dust mite control measures for asthma: systematic review. *Allergy* 2008;63:646–59.

⁶ National Heart, Lung, and Blood Institute; National Asthma Education and Prevention Program. *Expert panel report 3: guidelines for the diagnosis and management of asthma*. Washington, DC: US Department of Health, 2007.

⁷ Gøtzsche PC. Asthma guidelines on house dust mites are not evidence-based. *Lancet* 2007;370:2100–1 and Gøtzsche PC, Johansen HK. Authors' reply on 'House dust mite control measures for asthma'. *Allergy* 2009;64:190.

⁸ Gøtzsche PC, Hammarquist C, Burr M. House dust mite control measures in the management of asthma: meta-analysis. *BMJ* 1998;317:1105-10.

⁹ Bacharier LB, Boner A, Carlsen KH, et al. *Diagnosis and treatment of asthma in childhood: a PRACTALL consensus report*. *Allergy* 2008;63:5–34.

¹⁰ Mitka M. New evidence-based guidelines focus on treatment of children with asthma. *JAMA* 2008;299:1122-3.

¹¹ Schmidt LM, Gøtzsche PC. Of mites and men: reference bias in narrative review articles; a systematic review. *J Fam Pract* 2005;54:334–8.

¹² Pingitore G, Pinter E. Environmental interventions for mite-induced asthma: a journey between systematic reviews, contrasting evidence and clinical practice. *Eur Ann Allergy Clin Immunol* 2013;45:74-7.

¹³ Hallas HE. House-dust mites in our homes are a contamination from outdoor sources. *Medical Hypotheses* 2010;74:777–9.

¹⁴ [Dust mite allergy](#). Mayo Clinic 2021:July 31.

¹⁵ [Dust mites and asthma](#). *Asthma + Lung UK* 2023;Sept 30.

¹⁶ Andersen JB. [Grotesk sagsbehandling og afgørelse i Ankestyrelsen: Den træffer afgørelser uden specialister og partshøring](#). *Ugeskr Læger* 2009;171:3219.

¹⁷ Gøtzsche PC. [Evidensbaseret medicin: Ankestyrelsen mod Sundhedsstyrelsen om husstøvmider](#). *Ugeskr Læger* 2009;171:3727.

¹⁸ Andersen JB. [Cochraneanalyse om støvmidebetræk er ikke evidensbaseret medicin](#). *Ugeskr Læger* 2010;172:651.

¹⁹ Hoffmann T. ["Husstøvmider bor ikke i madrassen."](#) Videnskab.dk 2010;June 28.

²⁰ Smith E, Blands J. [Svar fra Sundhedsstyrelsen om husstøvmider](#). *Ugeskr Læger* 2010;Mar 18.

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- ²¹ [National klinisk retningslinje for non-farmakologisk behandling af astma hos børn og unge: Quick guide.](#) Sundhedsstyrelsen 2018.
- ²² [Non-farmakologisk behandling af astma hos børn og unge.](#) Sundhedsstyrelsen 2015;Sept 23.
- ²³ [Astma hos børn.](#) Rationel Farmakoterapi 2023;5;Oct 16.
- ²⁴ Mosbech H. [Allergi for husstøvmider.](#) Sundhed.dk 2022;June 2.