

# Habit cough is a cause of chronic cough in adults



Chronic cough is horribly unpleasant. Coughing frequency in those with chronic cough can be hundreds or even thousands of times per day during all waking hours. Quality of life is substantially decreased in those with this disorder. More than 40% of adults with chronic cough seen at specialty cough centers have no identified cause or effective treatment and are defined as idiopathic or refractory.<sup>1,2</sup> Children with chronic cough without a cause generally have a functional cough best known as habit cough (other terms used for this disorder include tic cough, psychogenic cough, and somatic cough disorder).<sup>3</sup> Habit cough has not generally been recognized in adults.

Peter Dicipinigitis, cough specialist and editor of the journal *Lung*, acknowledged that psychogenic cough is well documented in children (for which he references “The habit cough syndrome and its variations [Lung 2012;190:45]). He then went on to say that “after evaluation of 1000 patients at our Cough Center, we have yet to make a diagnosis of psychogenic cough.”<sup>4</sup> In fact, reports of psychogenic cough in adults have been limited to occasional case reports.<sup>5,6</sup>

In contrast, 20 adults self-reported to us that they experienced cessation of their chronic cough from viewing a recording of a video teleconference (<https://youtu.be/jnQUvD8Qdj0>). That video showed cessation of severe chronic cough in a 12-year-old girl receiving suggestion therapy, a simple behavioral technique, that 90 parents had similarly reported their children with habit cough stopped coughing from watching it.<sup>3</sup> The video had been placed on the web by the girl's father in February 2019. The 20 adults reporting that they stopped their chronic cough after viewing the video all had a repetitive dry cough throughout

the day that was absent once asleep—the same clinical characteristics of habit cough reported in children.<sup>3</sup> We have previously reported that children with habit cough who viewed the video experienced cessation of the cough just as it occurred with direct contact. We referred to this as suggestion therapy by proxy.<sup>7</sup>

The 20 adults who self-reported cessation of their chronic cough included 11 women and 9 men (Table 1). The median age for women was 48 years with a range of 24 to 70 years old. The median age for men was 27 years with a range of 21 to 60 years old. The duration of cough for women averaged 39 months (median) with a range of 1 to 240 months. Men had a median duration of 48 months for their cough with a range of 4 to 240 months. Whereas some children also had durations of cough of more than 1 year, the median duration of habit cough for children was 4 months.

Although functional cough has not been generally recognized in adults, a 1685 publication described an adult woman with “a violent dry cough following her day and night unless she was fallen asleep.”<sup>8</sup> Habitual cough that persisted after the original illness resolved, has been described in medical literature since 1694.<sup>9</sup> An 1886 publication described the same type of persisting cough following an initial illness as “. . . a habit cough—a reflex effect persisting after the cause is gone. . . or an acquired habit.”<sup>10</sup> These descriptions are consistent with the characteristics of habit cough in both children and the 20 adults that were self-identified to us.

It is highly likely that there are adults with similar conditions who never contacted us. Therefore, it seems prudent for those at referral cough centers to identify these adults with chronic cough in which the clinical course is consistent with habit cough. This would include

**Table 1**  
Adults Who Confirmed Cessation of Chronic Cough by Watching the Online Video of Suggestion Therapy<sup>a</sup>

Contact initials	Contact date (MM/DD/YYYY)	Location	Sex	Age (y)	Cough duration (mo)
WX	3/23/2019	Canada	F	68	72
NY	6/9/2019	Minnesota	F	58	>12
JT	9/5/2019	Canada	M	27	36
AK	12/13/2019	Nepal	M	26	60
RT	1/15/20	Philippines	M	60	180
RT	7/14/2020	Singapore	F	24	9
HD	8/4/2020	Iowa	F	62	120
GP	9/16/2020	Illinois	M	23	120
KM	9/21/2020	Nebraska	F	41	60
TA	10/17/2020	India	M	21	5
SR	10/28/2020	California	F	44	17
GA	11/4/20	Minnesota	M	30	24
SB	11/28/2020	Florida	M	25	4
AD	12/1/2020	Texas	M	53	240
DB	12/2/2021	Hungary	M	29	4
JH	12/3/2021	Florida	F	41	75
GT	8/27/2022	New York	F	31	3
AL	8/29/2022	California	F	70	68
NP	11/14/2022	Maryland	F	60	<1
DB	11/24/2022	Australia	F	52	240

Abbreviations: F, female; M, male.

<sup>a</sup>These adults indicated to us through email that they were able to stop their chronic cough by watching an online video of suggestion therapy, which resulted in the cessation of chronic cough in a 12-year-old girl. Permission for use of anonymized patient data for research was obtained from all contacts.

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adults having chronic cough without an identified cause that is repetitive, occurring daily, is nonproductive, and is absent when asleep.

The importance of this report is that it shows that some adults with chronic cough have the same clinical characteristics as children with habit cough and relate to a video showing effective suggestion therapy. A limitation of this report is the lack of a randomly assigned treatment of suggestion therapy that stopped the cough in these 20 adults. Our data suggest that adults with chronic cough without a cause, who have the clinical characteristics of a daily repetitive nonproductive cough that is absent once asleep, should be identified as potentially having habit cough. A sample of such patients then could be randomly assigned to suggestion therapy or an appropriate placebo.

Miles Weinberger, MD<sup>a,b</sup>  
Dennis Buettner<sup>c</sup>

<sup>a</sup> Rady Children's Hospital  
Pulmonary Division  
University of California San Diego  
San Diego, California  
<sup>b</sup> University of Iowa  
Iowa City, Iowa

<sup>c</sup> Habit Cough Association  
Severna Park, Maryland  
miles-weinberger@uiowa.edu

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## Sublingual immunotherapy (SLIT) for house dust mite — when to take a break? An unusual reaction to SLIT post vaccinations



Allergic conditions such as allergic rhinitis<sup>1</sup> have been increasing in recent years, leading to the development of many forms of immunotherapy.<sup>2</sup> One such recent development is the standardized quality house dust mite (HDM) allergen extract tablets (Acarizax), which have been proven a safe and effective management option for sublingual allergy immunotherapy (SLIT) in adults with confirmed HDM-induced allergic rhinitis or allergic asthma.<sup>3</sup> Acarizax is generally well tolerated by adults with allergic rhinitis;<sup>4</sup> however, some experience mild-to-moderate allergic reactions in the mouth that generally subside within a few days. A recent real-world study published in 2021 reported mild-to-moderate adverse events such as oral pruritus, throat irritation, ear pruritus, mouth swelling, and eye pruritus.<sup>5</sup> I would like to report an interesting case of a patient with confirmed HDM allergic rhinitis, commenced on Acarizax with a subsequent unusual reaction.

The patient, a 32-year-old man, was commenced on SLIT (Acarizax). He tolerated the SLIT extremely well for 4 weeks, with only occasional mild throat irritation lasting up to 30 minutes after the dose. He was otherwise well. Unconnected to his HDM allergy, the patient planned on going on holiday soon and required several travel vaccinations. He attended a travel medicine clinic and received several vaccinations, including yellow fever (Stamaril—live, attenuated vaccine), typhoid (Typhim Vi—polysaccharide vaccine), diphtheria-tetanus-pertussis (Revaxis—combination vaccine), and hepatitis A (Avaxim—inactivated vaccine). The next day, he took SLIT and

experienced an immediate reaction. He placed the tablet sublingually and as advised, waited 1 minute before swallowing.<sup>6</sup> Seconds after swallowing, the patient reported intense burning chest pain andodynophagia. He had no other allergic symptoms such as respiratory compromise, skin reaction, angioedema, or vomiting, or symptoms that could reflect a systemic response. Intense symptoms lasted approximately 18 hours, with some relief from over-the-counter antacid (Maalox Plus, containing active ingredients dried aluminum hydroxide gel, magnesium hydroxide, simethicone) and antihistamine (fexofenadine 120 mg daily). SLIT was immediately stopped, and symptoms gradually resolved over the course of 4 to 5 days. The patient remained off SLIT for 11 days and received a coronavirus disease 2019 (COVID-19) booster vaccine (Comirnaty) during this time, with no issue. Three days after the COVID-19 vaccination, SLIT was recommenced, and the patient continues to take it without issue.

This unusual reaction could perhaps be explained by immunologic stress from multiple vaccinations coupled with SLIT; however, such reactions are undocumented to date. Alternative diagnoses such as eosinophilic esophagitis could perhaps be considered because eosinophilic esophagitis has a known association with Acarizax;<sup>7</sup> however, owing to the immediate onset of intense symptoms, it seems unlikely in this case. Current advice is that Acarizax treatment should be temporarily interrupted when the patient undergoes dental work such as extraction or with oral injuries;<sup>8</sup> this was not the case for this patient. Other nonallergic diagnoses for chest pain andodynophagia were considered and ruled out.

An international survey of experts, conducted by Masieri et al<sup>8</sup> in 2021, showed that despite 95% of respondents having experience of allergen immunotherapy (AIT) and vaccination, there are still no

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