Misophonia phenomenology, impact, and clinical correlates

James M. Claiborn¹, Thomas H. Dozier², Stephanie L. Hart³, and Jaehoon Lee³

¹Independent practice, South Portland, ME, USA
²Misophonia Institute, Livermore, CA, USA
³Educational Psychology & Leadership, Texas Tech University, Lubbock, TX, USA

*Corresponding author: James M. Claiborn, 6 D St. South Portland ME 04106, USA phone: 1-207-799-0408, fax: 1-207-767-7002, email: anxietyshrink@gmail.com

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Abstract

This research study was conducted to determine the effect on quality of life and gather information about the characteristics of misophonia. It was a large scale, online survey with over 1,000 respondents. The key findings were as follows. 1) People suffering with misophonia experience a reduced quality of life. 2) Misophonia can develop at any age, with the median and mode age of onset at 9-10 years. 3) Treatments to date had been generally ineffective, but some reported treatment being very helpful. 4) Eating stimuli are by far the most common, with 96% of people reporting this trigger. 5) Most people reported physical reactions as a part of their response to triggers.
If you are looking for a definition of misophonia, it is a severe sensitivity to specific soft sounds and visual images. It also includes other forms of stimuli that cause an immediate extreme reaction. When a person hears the sounds, the person has a very strong emotional reaction such as hate, anger, anxiety, rage, and resentment. People who suffer with misophonia often report that they feel the person is intentionally making the sound, even though when they are calm and away from the sound, they acknowledge that the conclusion at that time was not accurate.

A person experiencing misophonia generally has excellent hearing. It is not a sensitivity to the volume of sound, but an emotional and physiological reaction to specific sounds. At first it is generally the sounds of specific individuals that cause the reaction, but it usually spreads to the sounds made by others and to additional sounds. The chewing sound of a friend may be annoying, while the chewing sound of a parent elicits (forces automatically) a strong reaction and is intolerable.

What causes misophonia? The misophonic reaction appears to be an involuntary physical and emotional reflex caused by the sound. The sound directly activates the Autonomic Nervous System which is located in the brain stem and the Limbic System which is associated with emotion. This is a direct connection between the sound and a reflex reaction. Think of the sound as causing the same reaction as a hard poke in the ribs with a stick.

Behavior science explains this physiological reaction as a “respondent” or “reflex” behavior that has been acquired or developed by pairing the sound with a distressed (stress, anxiety, etc.) physiological condition. When these two things happen at the same time (distress and the
sound), it creates neurological wiring in the brain that causes the misophonia reaction when the sound is heard again. I call this an acquired reflex because it is not an innate or inborn reaction (did not exist at birth). It is a reflex because it is a direct connection from a sense (hearing) to the Autonomic Nervous System and the Lymbic System.

We see that misophonia is actually a double reflex. We think of misophonia as an extreme emotional (reflex) response, and it is. The brain imaging study by Dr. Sukhbinder Kumar, The Brain Basis of Misophonia (2017) provides evidence for the emotional reflex response of misophonia, and it is driven by the vmPFC which is an emotional learning brain structure. But there appears to also be a physical reflex that occurs, which is usually a skeletal muscle flinch. The physical reflex can also be deeper inside the body. There are reports of individuals with stomach, intestine, or esophagus constriction, urge to urinate, or a sexual sensation. This will be discussed more on other pages. A study of the physical reflex of misophonia (Dozier & Morrision, 2017, Phenomenology of Misophonia: Initial Physical and Emotional Responses) was published in the American Journal of Psychology.

Once again, what causes misophonia? Misophonia seems to occur more frequently in a person with a higher level of anxiety, stress, or compulsive behavior. The reaction often develops first to a parent or family member where the person has a high level of anxiety or distress (physiological state of distress) and they repeatedly hear the sound. It also seems to happen when a person cannot escape from the sound, such as at the dinner table, in a car, or even laying in bed. In rare cases, the original misophonia trigger has been a repeating visual image (body movement).
With most sounds, the sound is taken into the brain and then the person makes a thoughtful response. The person considers the meaning of the sound and then responds. This is called a “high road” response. (It goes through the higher part of the brain before the person reacts.) For example, a person says to you, “I hate you.” You have to first think about the words and the meaning. You then respond based on the meaning. In this case, if words are a reply to “Your feet stink,” then you know it is joking or name calling, and you don’t have a negative emotional response. If you perceive the person is serious and the person is important to you, then you may have a strong, negative emotional response, such as crying.

Once the misophonic response is established for one sound, other sounds seem to be added over time. Because of this, those with misophonia often have a number of sounds that cause the reflex reaction, and it may impact many aspects of their lives. Without treatment, the prognosis for misophonia is grim. The misophonic responses usually get worse and worse, and the negative impact on the person’s life gets progressively greater.

**Prevalence of Misophonia**

How common is misophonia? Many consider it a rare disease, and on rare disease day (the last day of February), many on the Facebook misophonia group express a desire to speak out about misophonia. In the United States, a rare disease has officially been defined as one that affects less than 200,000 people in the US, which is about one in 1,500 people (0.07%). By this definition misophonia is not a rare disease. It is a “rarely known” disorder.
I did my first survey on misophonia in February of 2013 on different characteristics of individuals with misophonia. I was trying to determine how misophonia develops and if there were certain characteristics people with misophonia have in common. I wanted to have a control group to compare some of the personality traits and characteristics, and so I sent the survey to my LinkedIn contacts. Much to my surprise, 5% of my LinkedIn contacts had misophonic reactions. And so I thought, wow, this is not some extremely unusual phenomenon here. In fact, I had people with misophonia popping up all over the place.

I paid for a survey using SurveyMonkey.com, where they randomly solicited individuals who had no connection to misophonia. These were just individuals who were willing to fill out surveys to have fifty cents donated to the cause of their choice. I purchased three hundred and I got ten extra for free. I made sure that the title of the survey did not mention sound or sensitivities. I gave the same survey to a group of people with misophonia to determine a standard of reference for my Survey Monkey group. Out of the 310 people surveyed (50% of them women, 50% men), I found that 15.2% had reactions suggesting misophonia. It was more common among the women (18.6%) than it was among of the men (11.6%).[i] Rather than being a rare disease, which is one in 1,500, it was a rarely known but common disorder with about 225 in 1,500 having misophonia.

That was actually a higher number that I expected. I was expecting 5% to 10%, but it came in at 15%. In 2014, there was a published peer-reviewed study that came out of the University of South Florida’s College of Medicine and their psychology department. They used undergraduate psychology students. (This is very common in college research; they give
psychology students a little extra credit for taking a survey or participating in some form of research for the graduate students.) They had almost 500 participants in this study, and 84% were women. Their study was comprehensive enough to see how the misophonia affected the individual’s life. They found that 20% had clinically significant misophonia,[ii] significant meaning they had to spend a good deal of conscious energy resisting or being affected by triggers. They did not find any statistical difference in the prevalence of misophonia in men vs. women.

A recent blog post on the family ancestry website 23andMe.com mentioned an internal study conducted with about 80,000 customers, in which people were asked “Does the sound of other people chewing fill you with rage? (Yes/No/Not Sure).” About 19% replied yes. They also found that the affirmative response was more common in women.[iii] 23andMe reported 20% yes and 80% no (excluding the not sure responses). One internet post indicated there were about 4% not sure. So that would reduce the percentage of “yes” responses from 20% to 19%.

A 2015 PhD dissertation on decreased sound tolerance (hyperacusis, tinnitus, and misophonia) reported 15.6% of participants with clinically significant misophonia, in a mix of college students and community participants.[iv] A higher percentage of males reported misophonia symptoms, but females reported greater severity. This provides further support for the surprisingly high prevalence of misophonia.

The takeaway from this is that misophonia is really quite common – perhaps affecting approximately 15% of adults (or 1 in 6.5 adults). It seems to be more common (or at least more
severe) in women than in men, but many, many people suffer in silence, or they are written off as being grouchy, cranky, or irritable. If this number is correct, and research is beginning to confirm it is, there could be forty million people with misophonia in the United States alone – that is 40,000,000 people.

Considering these statistics and the fact that misophonia is not widely studied, if you randomly selected a doctor or therapist and then another individual, it is more likely that the random individual would have misophonia than the doctor or therapist would know about misophonia.
Figure 1. Annual rate of onset of misophonia of study participants ($n = 1042$)

<table>
<thead>
<tr>
<th>Trigger sound</th>
<th>Percent ($N = 1061$)</th>
</tr>
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<tbody>
<tr>
<td>Mouth sounds, such as chewing, crunching food, lip smacking, slurping, tongue clicking, or throat clearing</td>
<td>96.5%</td>
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<tr>
<td>Breathing sounds, such as gasping, wheezing, sniffing, or other loud mouth sounds</td>
<td>83.3%</td>
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<tr>
<td>Mechanical sounds made by hand, such as keyboard clicking, pen clicking, pencil tapping, crinkling paper, or nail clipping</td>
<td>67.3%</td>
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<td>Foot sounds, such as tapping, stomping, shuffling, or squeaking shoes</td>
<td>59.5%</td>
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<tr>
<td>Hand sounds, such as finger snapping, tapping, or rubbing.</td>
<td>58.7%</td>
</tr>
<tr>
<td>Speech sounds, such as consonant sounds (s, k, p, etc.) or mispronunciation of words</td>
<td>31.5%</td>
</tr>
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Mechanical sounds without people involved, such as clock ticking, copy machine noise, or phone ringing 38.3%
Joint sounds, such as knuckle cracking 36.9%
Other sounds 27.6%

References


