

Digital Noise Algorithms

I thought my hearing aids had a “noise” program - I don’t think it is working!

This is a very common complaint from people wearing hearing aids. I think this is a good time to explain why.

As most of my patients will recall, I have told them that today’s hearing aids generally have a **digital “noise” program** built in to their instruments. Much like expensive glasses can transition from a clear plastic to a darker plastic when the user wears them in bright conditions, most hearing aids transition from a “calm” program to a “noise” program. However, unlike the obvious change in the color of the lens for glasses, many people question whether their hearing aids are changing to meet the changing conditions that noise represents.

At the heart of this complaint is that many patients are still finding it difficult to comprehend speech in a noisy room. For them, not being able to understand is the same thing as the hearing aid not getting rid of noise. However, that’s the problem - these are two different things. Generally speaking, hearing aids are lowering the amount of noise by dropping the sound coming from behind the patient (directional microphone technology) while also changing the prescription (most often the hearing aid will lower the volume in the “bass” tones) while in noisy places. **Despite this transition to the noise program, many people still find it difficult to understand in those circumstances and thus the complaint that the aid is not working in noise.**

Previous articles I have written specifically mention noise and what patients can do to help themselves in those conditions.

I should mention that there are a number of hearing aid manufacturers: most companies develop their own technology when it comes to improving speech understanding in noisy conditions; as a rule, each company sells hearing aids with basic noise programs and hearing aids with more elaborate noise programs. As you might have guessed, the cost goes up with the technology. Sometimes the more elaborate noise programs do make it easier for the person to understand speech in noise, sometimes not. Noise programs also kick in for more than just crowd or cocktail-type noises. They might be activated for more specific things, such as steady state noises like fans, rooms that echo, and wind noise.

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