Is Hearing Loss the New Diabetes?

The twentieth century has seen many revolutions in the way we live our lives. One of the less discussed is that it has given us the mass ability to actively injure our health. Over the last fifty years, the miracles of modern science have turned the medical profession 180 degrees, sending maladies to the grave rather than its patients. To compensate, we've taken the opportunity to find highly successful ways of throwing that newly found health and longevity away. Throughout the twentieth century we have developed generational and lifestyle diseases on a massive scale as we live longer and indulge our addictions. From smoking and lung cancer, alcohol and cirrhosis, to fast food, obesity and type 2 diabetes, humanity has shown its unerring ability to put short term pleasure ahead of long term health. Each of these diseases impact society, not least because of the cost of supporting a population which is avidly collecting a growing range of self-inflicted, long term chronic conditions.

Another one, which we don't talk about and generally don't want to hear about is quietly joining the list of widespread chronic conditions – hearing loss.

There's nothing new about hearing loss – it has always been associated with the aging process. With the invention of gunpowder and the industrial revolution, manmade noise began to overtake natural causes as its instigator. Better understanding of the issues, along with more stringent Health and Safety legislation in the developed world has begun to make inroads into the problems of noise-induced hearing loss in the workplace, but being the perverse creatures we are, we've replaced that with an equally effective and more widespread way of damaging our hearing – amplified music.

Industrialisation increased the noise level of daily life for large numbers of people, but not to the universal extent that recorded music has. In 1913 Debussy mused as to whether "we should fear this domestication of sound, this magic preserved on a disc that one can awaken at will? Will it not bring to waste the mysterious force of an art which one might have thought indestructible?" Whilst his concern was about the effect on music as an artform, we took to that domestication of sound like ducks to water. As electronics became more efficient we also turned it up, and then started carrying it with us, to the point where amplified music now surpasses any other man-made noise as the primary cause of hearing loss.

People have acknowledged the problem for years, but it's always seen as too far away to worry about. Last year the World Health Organisation finally put it into perspective, publishing their research which estimated that 1.1 billion young people worldwide could be at risk of hearing loss due to unsafe listening practices. They believe that "nearly half of all teenagers and young adults (12-35) in middle- and high-income countries are exposed to unsafe levels of sound from the use of personal audio devices and some 40% of them are exposed to potentially damaging sound levels at clubs, discotheques and bars."

The question is what to do about it? The WHO suggests that "a number of preventative strategies can be employed to preserve hearing", but most of those strategies come down to telling people not to do it. Unfortunately, preaching is unlikely to succeed, particularly where it can appear to be a self-congratulatory condemnation from an older generation. Users are unlikely to bother until they start experiencing some of the symptoms, by which point the damage will have been done. Simply informing them of the error of their ways will have a very limited effect, as we've seen in other areas of health, from drinking to overeating and smoking to safe sex. Any health consequences that do not manifest themselves within twenty-four hours are quickly dismissed given the prospect of a more immediate endorphin rush.

The pressure to listen is immense. After millennia of evolution with only natural sound, recorded music has been adopted like a drug. First the Walkman, then the iPod and now smartphones with an unlimited range of music to stream on demand are making music the first point of call throughout the day for large swathes of users. As we increasingly consume it outside the home, it has to cope with the higher background noise of everyday life, with the inevitable result that we turn it up.

As if that were not persuasive enough, personal audio has generated some of the most iconic images of the last decade, notably in Apple's brilliant advertising campaign for the iPod.



What that tells us is that music is not just about technology – it's a sensation that is an inherent part of your lifestyle. Each image in the series expresses the sheer joy of the listener. They tell the story that personal audio is both possible and desirable. Wherever you want it and whenever you want it. The power of the image, which most of the world's population would instantly recognise, illustrates the problem which exists in communicating any risk to users. How can any public health campaign compete with such brilliant marketing?

There is no inherent problem in listening to music; the issue is in listening to loud music, but that's a subtlety which is surprisingly difficult to convey. What is not understood well enough is that hearing loss is irreparable damage. Although it's often compared to sight loss, most visual impairments are fully reversible with glasses or contact lenses. They may be inconvenient at times, but for most people they can restore perfect sight. In contrast, hearing loss is permanent damage. Hearing aids help to counter the worst effects, but you will never get your original hearing back. Damaging your hearing by exposure to loud music or noise is not just a short term annoyance; it is better compared to losing your sight by repeatedly rubbing your eyes with sandpaper.

It's difficult to know what effect this level of hearing loss will have on society. We are heading for a generation of thirty year olds who have a hearing capability which we would normally associate with their grandparents.

There's not a lot of research that I've found that addresses the societal cost of hearing loss. A paper by Margaret Wallhagen points out problems with keeping jobs, suggesting that individuals with untreated hearing loss are likely to have a reduced earning capacity, typically losing between \$14k and \$30k a year. A wider review by The Ear Foundation attempts to put numbers on that for the UK as a whole. It has "no doubt that hearing loss in adulthood has a huge impact on mental health, social life and employment", suggesting figures of £4 billion for lost earnings, £60 million in increased social care, £76 million in additional GP appointments and an estimated £26 billion representing the burden of reduced quality of life. A larger, Europe-wide review from Bridget Shield looks in more detail at some of the psychosocial effects as well as prevalence, but as with the other reviews, these are mainly based on an elderly population.

It is worrying to contemplate the effect of mass hearing loss across the population starting in people's late twenties. Even before this kicks in there is evidence that we are losing the power to talk to each other. Sherry Turkle, an anthropologist working at MIT has written several very compelling books about our interactions with technology. Her most recent, "Reclaiming Conversation" examines the way messaging and social media has stopped us talking, with youngsters preferring messaging and the considered construction of personal, online images. If that generation is already slow to gain the power of conversation, then starting to lose their hearing in their early twenties, may mean it never achieves it. We need a wake-up call of similar power to Rachel Carson's "Silent Spring", otherwise we could join the robins as we head for a silent summer and autumn.

So how do we find an effective nudge that can modify behaviour? Explanations of decibel levels are hardly compelling, so it needs to be hard hitting. The most effective campaign I've seen so far has been from Action on Hearing Loss (formerly the RNID) in the UK. They ran a particularly graphic set of posters targeting young music goers.



The problem is that organisations like this have limited funding. At best, a small percentage of people will see it, and probably only see it over a period of a few short weeks when the campaign is running. The RNID runs an excellent information website at www.loudmusic.org, but it only garners around four comments a year from readers, suggesting it's not widely used. I suspect that for many

teenagers, even with the strength of imagery of this campaign, it won't stick in the mind the way that Apple's images do.

This generation is largely untouched by hearing aid advertisements, as most of the industry is still targeting its current demographic. Commercially that makes total sense, as they are their current customers, but it does nothing to make hearing aids relevant to the young. It only reinforces the stigma that if you need one, you must be old.



The one notable exception is a campaign Widex ran in New Zealand. I'd love to know how well that worked.



Unfortunately, when Widex ran this billboard campaign in 2009, it was one of the most complained about adverts, according to New Zealand's advertising watchdog. It seems that the public is not ready for hearing aids to be considered fun.

Hence the need for a wake-up call. Hearing loss needs to stop being portrayed as an "end of life" problem and take its place in the regular medical check-ups that are part of normal life. I'm 61. For as long as I can recall I've been to see a dentist every six months. Since my late twenties I've seen an

optician every few years. Yet I've never seen an audiologist. I suspect that's the case for most people.

Hearing loss is no longer just an affliction of old age – it's something we inflict on ourselves. The industry needs to think harder about the fact that our hearing is for life and needs to be supported throughout that journey. Historically there has been almost no cross over between the companies selling us headsets and those selling us hearing aids, but that should change. There are opportunities for brands on both side of the fence to provide and protect what we hear.

A key part of that will be removing the stigma of hearing aids, promoting hearing to the same level as sight and glasses. That stigma is evidenced by the reaction of those with hearing loss – they generally deny their disability, blaming other people for muttering or talking too quietly, largely because they don't want to accept they need a hearing aid. If you have a visual problem, you don't pass the blame by telling people they're looking indistinct or fuzzy – you go and get glasses. Audiologists and hearing aid manufacturers need to recognise that difference and take a far stronger role in promoting themselves to the public.

It looks as if that change is starting to happen. Starkey, who produced the "if only he could hear.." advert above have just announced that they will be working with Bragi, offering custom versions of the Dash, describing it a hearable which "entertains you, enables you and protects you".



It is a welcome first step. If a cool consumer product can get that message of "protect" across it may start to change behaviour in a way that we have so far failed to achieve. Hopefully other companies will take a similar approach, making the point that hearing is something worth looking after. If they don't then we are looking at hearing loss becoming a major long term chronic condition for billions of young people, with all of the impact that will have on everyday life and society. It is important that we succeed.

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