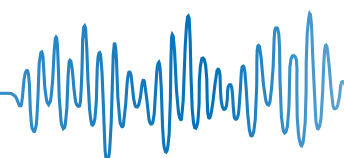


## Cochlear Implant Rehabilitation Advice:

# Getting used to high pitched sounds

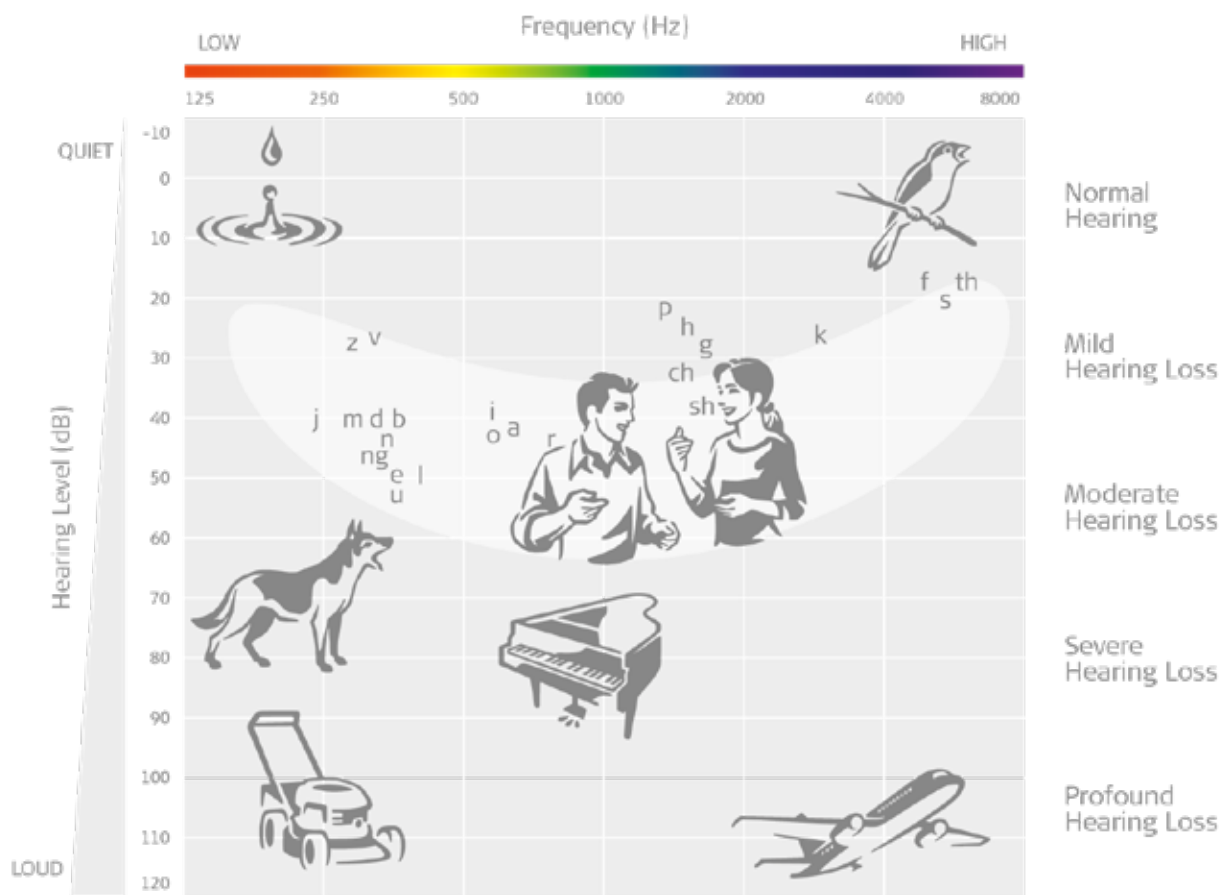
This advice sheet has been produced to support you as you learn to listen with your new cochlear implant. Before you had your cochlear implant the speech and language therapists talked to you about how speech would sound different at first. People who have just started to listen with their cochlear implants often tell us that speech and other sounds are squeaky and sometimes they tell us that sounds seem to echo. This can be worrying or annoying but it is very normal. We have prepared this advice sheet to explain why this happens and why it is a good thing.





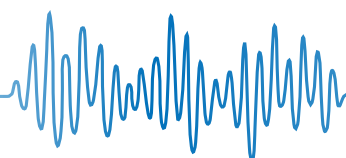
## Loud and Quiet Speech Sounds

The speech we hear is a combination of loud, low pitches and quiet, high pitches. The audiologist can test your hearing with your cochlear implant to make sure you can hear all the pitches that you need for good speech understanding. The audiogram below shows the 'Speech Banana'. This shows where all the sounds we make when we speak sit on the audiogram. The cochlear implant should be able to give you back enough sound to be able to hear all the sounds in speech.



The locations of sound on this chart are approximations. The specific pitch of the human voice differs amongst men, women, and children. Variations in distances between listeners and speakers may affect the perceived intensity. This chart is adapted from information provided by the American Academy of Audiology.

Your hearing aids could only give you a limited range of speech sounds but couldn't give you back very quiet sounds. Understanding more about what sounds you could and couldn't hear with hearing aids will help you to understand why some speech is hard to get used to through a cochlear implant.



Listen to the following sounds:

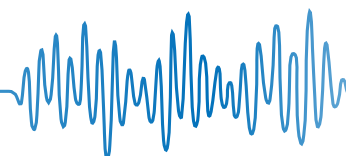


- These are all loud speech sounds. You use your voice to make them
- Say them yourself and put your fingers on your throat. You can feel your voice working as you say them. These sounds are 'voiced'

Now listen to these sounds:

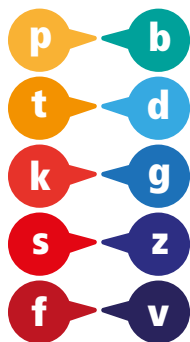


- Say them out loud. Put your fingers on your throat. You won't feel anything because the sounds are 'voiceless' (your voice doesn't work when you say these sounds)
- They are all very quiet, 'hissy' sounds made by pushing air through a small gap either through your lips, between your front teeth or between your tongue and the roof of your mouth
- Most people hear these sounds as 'hissy, beepy or echoey' when they first have a cochlear implant
- If it is a long time since you could hear these sounds, or you have never heard them in your life before, you will find it much harder to turn the hisses, beeps and echoes into real speech



## Loud and Quiet 'Twin' Sounds

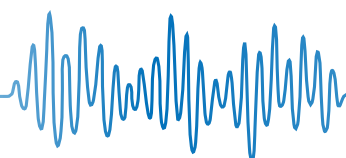
- If you have never heard some high-pitched sounds before you will have relied on lip-reading to understand speech.
- You may have been confused by sounds that look very similar when lip-reading but which give words different meanings.
- Think about these sound pairs:



- Say both sounds in the first pair 'p' and 'b'. Put your finger on your throat to feel for your voice. You'll feel your voice working for the blue (loud) sounds.
- Notice how your lips say these sounds. They come together and make a little puff of air. If you look in the mirror 'p' and 'b' probably look similar. You'll find the same with the other pairs.
- If you can get used to listening to the quiet, high pitched speech sounds with your cochlear implant you might find listening to and lip-reading speech easier.

## I didn't hear high pitched sounds when I was a young child. What did that do to my speech?

- You heard enough speech to learn how to listen and talk.
- Your brain had to 'fill in' the gaps where high pitched sounds should have been and work with what it had.
- You probably learnt some sounds just by watching other people.
- The way you say some high pitched, quiet sounds might be different to people who have always had hearing. Your cochlear implant won't change this.

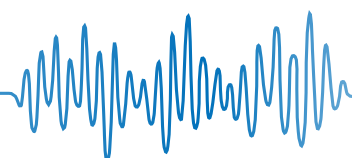


## Listening for high pitched sounds

- These exercises target some quiet sounds at the beginning and the end of some simple words.
- Sit next to your practise partner so you can't lip read them.
- Look at the rhyming word pairs below

toe	show
tore	shore
tin	shin
too	shoe
ted	shed
taught	short
ton	shun
tell	shell
teal	she'll
tame	shame
top	shop
tip	ship
take	shake

- Ask your listening partner to say both. Do they sound different?
- Now, using the same pair, ask your listening partner to just say one of the words. Can you work out which one they are saying?



Try the same thing with the rest of these rhyming words:

leash	leaf
cash	Cath
wish	whiff
gash	gaff
harsh	half
cosh	cough
lease	leash
gas	gash
mass	mash
mess	mesh
lass	lash

sea	she
said	shed
sell	shell
self	shelf
sip	ship
sigh	shy
so	show
sack	shack
sue	shoe
Sam	sham
sour	shower

mass	mat
mess	met
rice	right
lice	light
peace	Pete
face	fate
grace	grate
lace	late
loss	lot
less	let
kiss	kit
bass	bait

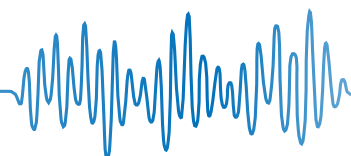
yes	yet
toe	sew
tore	sore
tin	sin
to	Sue
Ted	said
taught	sort
ton	sun
tell	sell
teal	seal
tie	sigh



tock	sock
tick	sick
tame	same
nice	knife
lease	leaf
lice	life
rice	rife
last	laughed
grease	grief
sin	fin

foe	sow
fell	sell
said	fed
saw	for
same	fame
sill	fill
sad	fad
sang	fang
sort	fort
sit	fit

toe	sow	show
tore	sore	shore
tin	sin	shin
to	sue	shoe
Ted	said	shed
taught	sort	short
ton	sun	shun
tell	sell	shell
teal	seal	she'll





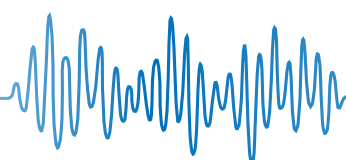
foe	sew	show
four	sore	shore
few	sue	shoe
fed	said	shed
fell	sell	shell
fort	sort	short
feel	seal	she'll
fun	sun	shun
fine	sign	shine

## Other Things To Try

- Make bingo cards like the ones below
- Numbers have lots of high pitched 's' 'f' 't' 'th' sounds
- They also sound very similar so don't try this until you are starting to feel confident about your listening

7	15	2	66
45	30	24	8

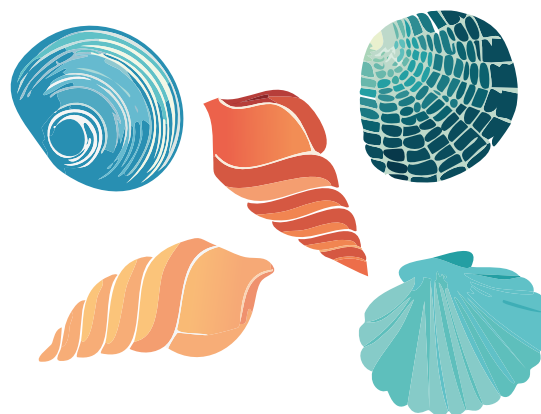
50	43	15	77
10	13	86	93



## Go Back to Your Childhood

- Some tongue twisters or nursery rhymes that you might remember could work.
- Some of them might be in your memory but you can easily find these on the internet. Search for tongue twisters
- Tune into all the high pitches while your partner recites them.

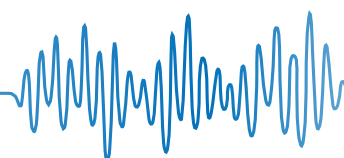
- Here is an example:  
She sells seashells by the seashore  
The shells she sells are seashells I'm sure  
So, if she sells seashells on the seashore  
Then I'm sure she sells seashore shells.



## Just Keep Listening



- Enjoy conversations with your family and friends.
- Conversation is the best way to get used to how speech sounds through a cochlear implant.
- The more you listen to people talking the quicker your brain will adjust.





## Accessible Information

If you need this information in another format or language, please ask a member of staff.

## Smoking

Bradford Teaching Hospitals NHS Foundation Trust is a smoke-free organisation. You are not permitted to smoke or use e-cigarettes in any of the hospital buildings or grounds.

Named Author:

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