

## WHAT DOES “GO FOR GOLD” MEAN?

The cochlear implant is amazing technology. However, even though it is brilliant at helping your deaf child to hear, it is **still** not exactly the **same** as hearing normally.

Instead, there are some **missing** pieces in the sound information your child receives when they listen through their cochlear implant. To **fill in** these gaps, your child has to do extra brain work (known as “**listening effort**”), in order to make sense of what they are hearing.

Everyone has to use some listening effort to understand speech. This makes us **mental athletes**. It takes lots of training (especially in the early years of childhood) to work out what the sounds mean and how to put them together into words.

But your deaf child will be **working harder** than a hearing child, because they have to also **fill in** the gaps in the sound the cochlear implant is providing (before they can even begin to understand the words). This means that your deaf child has to be a **mental athlete** at **Olympic gold medal standard**.

Like any Olympian athlete, your child needs specialist **training** and **support**. They also need the right amount of **rest**, so that they can **recover** from all the listening effort. With the right combination, they can successfully “**Go for Gold**”.

This leaflet will explain how you can help your child achieve their true potential by using the **Go for Gold strategy**.



## WHY IS IT IMPORTANT TO UNDERSTAND AND MANAGE LISTENING EFFORT?

It is normal, natural and healthy to experience listening effort. However, if listening effort becomes **too high** for **too long**, this can cause “**cognitive overload**”. This is where the brain becomes **overwhelmed** and will start to struggle to process any new information. The brain then becomes **stressed**.

Normally, stress is not damaging to your health as long as it is not constant. So, a healthy pattern of stress is where stress levels go up and down over time (like a wave).



However, if the stress levels stay high for most of the time, health problems begin to happen. These can be physical problems (e.g. allergies and infections, or gut problems). The health problems can also be mental (e.g. anxiety, depression, or eating disorders).

Children with cochlear implants are more likely to reach **cognitive overload** more quickly than hearing children. This is because they need to use **more** listening effort than hearing children to understand what is being said.

Reducing listening effort helps to produce a healthy and more “wave-like” stress pattern. A healthy stress pattern means a healthy child too. So, reducing listening effort is important for your child’s health.

Listening effort **can be managed** and also **reduced** in many different ways.

To see how, look inside this leaflet for the **Go for Gold strategy** for success.



# Go for Gold!



*Help your child to succeed with their cochlear implant, by understanding and managing listening effort*

By

**Dr. Helen Willis**  
Cochlear implant user  
&  
Auditory Neuroscientist

# THE “GO FOR GOLD” STRATEGY.....

## 1. GOLDEN SILENCES

The key to getting a **healthy pattern of stress** for your child is to **reduce** listening effort intermittently during the day. This can be done quite simply: you can just create a “**golden silence**” in a quiet environment, with **no** background noise (**no** music and, very importantly, **no** conversation).

During this period, encourage your child to do any sedentary play activity that they are able to do on their own without your help. These activities could include **drawing, colouring, painting, craft work** (cutting & sticking), **knitting** (e.g. “Knitting Nancy”), **sewing** (e.g. sewing cards), **Duplo, Lego, construction toys, jigsaws**, and **imagination games** with **model figures**. Recent research shows that these more “old fashioned” toys and activities are actually “**mindfulness**” activities that are particularly good for reducing stress levels.

Also, if your child does not want to play, **stroking a pet**, or having a **cuddle** and **non-verbal interaction with you** (in silence), will help to reduce stress too.

Playing computer games, watching television, or using social media will not create the “**golden silences**” needed (even if the sound is turned off). This is because research shows that a lot of brain work is used in these electronic “screen-time” activities, so they are not relaxing for the brain. The **same applies** to listening to music, even soothing music.

Creating “**golden silences**” is particularly important at the end of a **school day**.

However, at **weekends**, or during **holidays**, it is **still** important to try to create opportunities for “**golden silences**”. This is because your child is more likely to experience **cognitive overload**, so even “fun” activities (like going to a theme park, watching a film at the cinema, going out to restaurants, or playing board games and just joining in family banter at the dinner table) will be quite hard work for your child. This is due to the **extra listening effort** involved.

So, try to let your child have at least **one golden silence** every day.



## 2. GOLDEN OPPORTUNITIES

“**Golden opportunities**” are times when your child is **alert, happy** and **receptive**.

When these occur you can create “**golden**” periods of high quality interaction, in whatever way suits you best: **reading together, talking about experiences, speech therapy**, or **auditory verbal therapy exercises**.

Essentially, just do whatever you feel will help your child to speak more clearly with a better vocabulary and understand you better.

It is best to aim for **quality**, rather than **quantity**, bearing in mind that all of these activities will **increase** listening effort and this will become **stressful** after a time.

### SIGNS THAT YOUR CHILD MIGHT BE REACHING COGNITIVE OVERLOAD

It is important to watch out for signs of **cognitive overload**. For example, at home, you may see your child behave badly. Now, this may simply just be naughtiness, **but** there is another possible reason: they have reached **cognitive overload**. This is caused by listening effort becoming **too high** for **too long**.

Cognitive overload can cause **irritability, tiredness, difficulty in taking in new information, poor memory** for something that has just been said, **lack of co-operation, unwillingness to join in** with an activity, **not wanting to go out, withdrawal** (taking themselves off on their own), **not wanting to be bothered or disturbed, temper tantrums**, and **aggressiveness**.

At school, any **disruptive behaviour, difficulty in remaining focused** on a task, **problems in understanding** a task, or **under-achieving** (compared to the teacher’s expectations) may also be signs that your child has reached **cognitive overload**.

By using the “**Go for Gold**” strategy, you will help your child avoid **cognitive overload** (and reduce these negative behaviours).



## 3. GOLD STAR SUPPORT

Because your deaf child will be using **extra listening effort** to understand the sound information being provided by the cochlear implant, they will have less space in their brain for **learning** language and other concepts. So, any way of **reducing** listening effort will **help** with their **learning**.

The more effective the support is, the more chance your child has of achieving their true potential. So, this is why support should not just be **gold**, it should be “**Gold Star**”. There are **two key requirements**:

**1. Easier access to the spoken word:** This can come in many forms and really depends on what works best for your child. For example, **speech-to-text technology** is getting better all the time. **Radio aid technology** and **sound field systems** can also help in the school classroom.

Your child may also prefer some form of **sign support** (e.g. Cued Speech, Sign-Supported English, or British Sign Language). The main aim is to provide your child with more clues so that they can fill in the gaps in the sound information (from the cochlear implant) **more quickly** and **more easily**. This then gives the brain more room for new information and learning.

**2. Easier access to the underlying concepts being learnt:** Another way to free up brain space to process and understand the new information, is to do some “**pump priming**” so that your child has a better idea of the underlying concepts.

For example, it is difficult to access Maths if you do not know your times tables, or your number bonds (i.e. the different combination of numbers that make 10, 20, 30 etc). Some of this work will occur during school hours, particularly if your child has the support of a Hearing Impaired Resource Base, or a designated classroom assistant. **Additional coaching/tuition** outside school can provide extra “**pump priming**” too (PIP or DLA payments could help with the cost of this extra support).

Because every child is **unique**, an **individualised package** (that suits the exact needs of your child) is essential to achieve these **two key requirements** for “**Gold Star**” support.

