**Desensitization**

* Sound therapy for treatment of hyperacusis is based on desensitization principle.
* Systematic exposure to non-annoying sound (with sound generators) gradually decreases enhanced gain of processing sound-evoked activity in the auditory system effectively removing hyperacusis.
* Sound from sound generators improves sound tolerance, and in the case of misophonia it will create a variable “shield” between patient and misophonic triggers.
* Binaural devices always recommended to preserve symmetry of stimulation of the auditory pathway.
* Avoid silence
* Avoid sound levels close to the threshold of hearing (sounds too soft not recommended)
* Avoid over protection of the ears.
* Sound generators to be used at least for 9 months – 12 months.
* At night use sound that is stable (not music) – gentle sounds, sounds of nature

Gradual desensitization example:

Imagine you are going to a country where it is impossible to avoid intensive exposure to sunshine, and you have very pale skin. On arriving in the country, immediate exposure to bright and powerful sunlight induces sunburn, and possibly severe illness due to the sunstroke. One alternative to avoid this is simply to remain covered with a complete layer of clothes, use sunscreen, a very wide brimmed hat, dark glasses, etc. As a result of this the skin remains highly sensitive and might even become more sensitive over time.

Another possibility is the gradual exposure to sunshine, using a strong sunscreen first and then gradually reducing it using weaker sunscreens with the skin exposed to the sun. As a result of this approach the skin will gradually become less sensitive to the sun and eventually it would be possible to tolerate exposure without any protection.

The analogy in hyperacusis is that patients experience great distress when exposed to moderate or high levels of noise. Overprotection of the auditory system from sound corresponds to the total protection from the sun scenario, and results in hyperacusis, or at best keeping hyperacusis at the same level for the rest of the patient’s life. Providing patients with a gradual increase of sound from sound generators results in a gradual desensitization of the central auditory system, which can be tailored to the individual needs of the patient.