Some Critical Remarks on Tinnitus-Retrainings-Therapy (TRT)

by

Dr. med. Lutz Wilden
Kurallee 16
94072 Bad Füssing

Tel: +49(0)8531/980198
Fax: +49(0)8531/980119
e-mail: info@dr-wilden.de
Internet: www.dr-wilden.de

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Lately there have been noted in the media, articles, which appear to appeal to the public to accept a therapy for Tinnitus patients called Tinnitus Retraining Therapy (TRT) *1.
Tinnitus Retraining Therapy consists of using a type of sound (called "pink sound") introduced into the affected ear of the patient several hours each day for months.
For this the patient must wear a device, fitted into his ear, which produces this noise, and is known as a "Noiser".

An Old Concept – Newly Repackaged

The idea, that a Tinnitus patient might be helped by introducing a continuous source of sound into his affected ear or ears is about 20 years old. Until today these sound producers have been known as "maskers". The theory for this is simple. The noise from the masking device drowns out the Tinnitus noise, thereby creating in the patient the illusion, that the perceived noise emanates from elsewhere, rather than from within his own head. The assertion is, this illusion psychologically relieves the patient, thereby making his Tinnitus more bearable.
From the representatives of this Tinnitus Retraining Therapy, who, for the most part belong to the ranks of the older proponents of masking, now comes the notion, that this idea is no longer correct. [*1]

Scientific Data is lacking

Although the older masker therapy for years has been an official academically recognized form of therapy by ENT physicians, and still is, and was financed with the help of the health insurance industry, there has been no explanation as to why its former proponents have now declared it to be flawed.
This is astounding, since the ENT university clinics must have huge amounts of data on masker therapy, and, therefore, must be able to properly evaluate the results of their newer "Noiser" (TRT) therapy. In fact this newer Noiser therapy differs from the older masker therapy only in that the introduced sounds are somewhat quieter and more broadband than before.

This less scientific turn of events is also difficult to understand, since the TRT is likewise financed by the health insurance industry. One has to ask, what information does the Federal Committee for Doctors and Insurance companies possess, which compels the insurance industry to pay for TRT.

Medical Teaching must be judged according to whether it either helps or hurts

Despite a lack of clinical data (= satisfied patients) and despite a lack of any demonstrable medical or technical innovation, the proponents of the Noiser therapy concentrate on communicating their newer theoretical concepts which are supposed to supersede the theoretical masker concept, as represented above.

In this the TRT has broken no new ground. In the history of Medicine there are many examples where an unproven viewpoint was simply to be sure, did the old teachings cause harm or were they merely a curiosity in the fantasy world of the medical profession.
Since we are dealing with an enormous problem, involving overworked organs of hearing, and the associated disturbances, which potentially affects every level of population, either acutely or chronically, and since obvious dangers exist for the inner ear organs with TRT, it is advisable for all those involved to thoroughly discuss the arguments pertaining to Tinnitus Retraining Therapy.

The New Theory of TRT

The theoretical basis for TRT are as follows:

1. chronic Tinnitus is absolutely incurable
2. each patient with chronic Tinnitus should therefore be treated with TRT
3. chronic Tinnitus develops within 3 months from an acute Tinnitus and thereby changes its etiology (= cause of disease)
4. clearly every person with chronic Tinnitus has a defect in his brain

The TRT recommends to the public, that it simply accept the current inner ear concepts, instead of rational investigation of the causes

In regard to 1 + 2. The declaration of incurability of the illness to be treated reeks of despair and helplessness. This is not a rational scientific approach, but rather one which is fundamentally religious. The dangers in this assertion are correspondingly enormous. For one, all endeavours are declared impossible, which might lead to rational investigations which could overcome this asserted “incurability” (this is of course possible: see the biology of the inner ear, www.dr-wilden.de / www.dasgesundeohr.de).
For the other the TRT escapes in this way any controls on its success. The buried message here is that humanity should understand that a cause can never be found. This is why more and more people each day find themselves with overworked inner ear organs.
Instead, everyone should accept, that Tinnitus, hearing distortion, hearing over sensitivity, ear pressure, vertigo and deafness are simple God-given changes, which arise from God knows where, likewise simply become part of us (according to TRT preferably in our brain) and that it is beyond our human abilities to competently treat these complaints.

Simultaneously in acceptance of his suffering, the patient should confidently turn to the TRT practitioners and their Noise concept, and be grateful to accept their help.

According to TRT the causes as well as the point of origin of the sickness involving chronic Tinnitus patients change

In regard to 3. According to the new theories of TRT practitioners, the acute original causes of Tinnitus change clearly and basically over an arbitrary period of 3 months.
They assert, that chronic Tinnitus has a completely different cause as an acute Tinnitus.
The TRT practitioners say that the symptoms of acute Tinnitus could arise from “damage to the inner ear, perhaps a sudden hearing loss, noise trauma, infections, narrowing of the great neck blood vessels, problems with the spinal column of the neck or high blood pressure”. *1
However, if the symptom described above as “acute Tinnitus” persists over 3 months, despite all the “state of the art” diagnostic and therapeutic endeavours of modern medicine, then, according to the beliefs of the TRT practitioners, this “chronic” Tinnitus clearly no longer arises from the ear, rather from the limbic system, the seat of our feelings and from higher brain levels. *1

The TRT lacks a Medical Explanation for this change in the causes of this problem

Previously the TRT has been unable to deliver an explanation as to how the cause of this overworked ear, such as the spinal changes or narrowing of blood vessels in the neck, was able to change to a cerebral cause alone. If, according to TRT, this change of cause is made with medical certainty, then it must be assumed that this certainty is derived from clearly recognizable connections. Such connections between the old causes (acute Tinnitus) and the new causes (chronic Tinnitus) are neither recognizable nor are they represented by TRT theory. What remains is an assertion of medical authority.

Thus the acute Tinnitus changes its point of origin after 3 months without explanation from peripheral to central.

What happens to the original problems?

This question of what happens to the original disorders once the Tinnitus becomes chronic remains unexplained by this theory of the TRT.
Is this exhausted inner ear caused by noise trauma, exposure to chronic loudness, or sudden loss of hearing, now healthy again? Are previously described neck spine abnormalities no longer there? What has happened to the possibly causative blood vessel narrowing, the infection, the high blood pressure, etc.? Are all these problems gone? Is the affected patient at least now free of these other bodily problems? If so, how did this happen? How can our body do that?
The theory of TRT gives no information to such pertinent questions.

Instead of this it tries to more closely describe this brain defect to the public and to the millions of affected people.

According to TRT, the cause of chronic Tinnitus is a defect in the brain

In regard to 4: The cause of the disease change from acute to chronic Tinnitus is, in the opinion of the TRT practitioners, a defect in the brain of the patients.

Thereby either an incorrect learning process has occurred, which keeps the perception of the Tinnitus noise in the brain in unclear fashion, or the noise has developed independently in the defective brain of the patient. *1

The representatives of TRT will not commit themselves to either of the above conditions. Here we have an unusual theoretical condition. The theory can neither deliver a conclusive etiology for the first variable, nor for the second representation to explain the presumed occurrences of incorrect learning process or a defective brain.

How does this brain defect appear according to TRT?

According to the theory of TRT, the brain of the person, who is plagued by chronic Tinnitus, can not distinguish between important and unimportant signals, on the basis of an incorrect learning process or a defect in the brain, which has caused the signal to occur independently. Thus the brain filter system, whatever that might be, has become defective.
According to the TRT practitioners, one should represent this suddenly occurring brain problem as such:
Should the Tinnitus appear for the first time, (ex. after a loud movie, concert, disco evening, etc.) the brain places a high value on this signal, “it could indeed be a sign of danger, leading to anxiety and tension.
The brain cries “alarm!”*1
“Simultaneously the brain over interprets this signal” *1
With this TRT asserts that an “incorrect learning process” has begun which continues on entire lifetime.

This “incorrect learning process” or “defect in the brain” farces the brain of the affected person to regard this Tinnitus signal not as a harmless background noise, such as the ticking of a clock, which it should filter out. Instead of this the disturbed brain of the affected person senselessly occupies itself with this signal, leading to its development as an independently occurring phenomenon. *1

At first the brain functions normally

A strange process is occurring worldwide in more and more human brains. At first, during the first three months of Tinnitus, the brain behaves normally. It is upset about this tormenting perception. In this phase the brain appears to function well enough to direct its owner in the majority of cases to visit their ENT doctor first, not a neurologist or a psychiatrist. Only then after all the ENT and other physicians have failed to help the patient with their diagnostics and therapeutics within 3 months, then the brain defect commences, which is equally unsuccessfully treated by TRT. It is interesting, that in Germany, insurance pays often for both forms of unsuccessful treatment.

There is no medical explanation for the brain defect promoted by TRT

Which biological mechanism is responsible for the fact that worldwide, million of human brains have been changed into incurably sick ones, and which biological mechanism is also responsible for the fact, that daily more and more people suffer the same fate and suddenly can no longer distinguish between important and unimportant information, such information as the TRT practitioners have spread in the media.
Is it a virus? An new form of schizophrenia? A toxicity?
The TRT practitioners can give no answers.
There is no answer, because no such mechanism exists.
In the entire world literature there has been no study which even partially supports or explains a biological, psychological or theoretical learning-process oriented concept, let alone any convincing conclusions in support of TRT.

What is offered as a foundation for the theories of TRT from Atlanta, to patients and the public, are confusing and unproven opinions about the ways our brain work, and last but not least a story from the curiosities of medical history.

A story from the cabinet of curiosities of medical history as a basis for brain – independence in producing Tinnitus noise in the brain

There have been cases where one or more patients in desperation to relieve their chronic Tinnitus have sought surgical relief by having the 8th Cranial Nerve, or nerve of heaving, divided. This has generally been unsuccessful, without relieving the tormenting acoustic signals. Therefore the conclusion of the TRT practitioners “are thereby proven, that the noises originate in the brain and not in the ear.”*1

The "phantom" has a clear biological origin

Apart from the fact, that added to this story, no single case-history has been documented in the world literature, the following must be established:
If any nerve, such as the acoustic nerve (8th cranial), is divided, then this nerve is not destroyed, but is massively traumatized and sends an enormous number of signals to its assigned portion of the brain. That this part of the brain would be excited and would reflect its excitement in its specific area of perception is understandable.
In the case of the acoustic nerve, this would reflect acoustic perceptions. These perceptions and signals might continue with diminishing intensity over months or years due to the long time required for nerve cells to regenerate.
So also is the well-known, but for this story, misused concept of phantom pain, no "phantom", such as an imagined or wrongly-directed sensation in the brain of a leg amputee, but rather is a biological process which goes together with division of a nerve in predictable fashion.
It has been known for decades that "phantom pain" as alluded to above, usually improves with time as natural wound healing occurs. If it does not, then a failure in the healing process has occurred, which can usually be corrected by surgical revision of the nerve stumps, but not by operating on the patients brain.

The patient must not be confused

We doctors may not use complex conditions to confuse or inappropriately reassure our patients, even though these conditions and explanations might be considered a matter of fact by other medically trained individuals. Rather, when we find we lack the sufficient knowledge or training, we must be completely honest in communicating this to our patients.
Only by doing so can we maintain our sincerity in the doctor-patient relationship. And only then, when we have finished with our "Latin and Greek", can the patient bring in his own creativity in overcoming his personal problem.
Conclusion: There is no proof that an incorrect learning process takes place in the brain of Tinnitus patients, and there is no proof that a continuous signal arises independently in the brain.

Now we come from the questionable theoretical background of the TRT practitioners to the theoretical concepts of TRT which derive therefrom.

The main therapeutic assertion of TRT are:

1. The patient should avoid quiet and seek noise.
   "Goal is, to direct the ears again toward the outside"*1.
2. The patient should send sound softly by way of the Noiser into his affected ear(s) over one – two years several hours each day.

This combination of behavioural training should exert a positive influence on the resumed brain defect of the patient according to the assertion of the TRT practitioners. *1

Noise in the brain should be driven out by noise in the ear

The TRT believes that building a "noise curtain" will cause the affected brain over time to relegate the Tinnitus signal to unimportant background noise and thereby drown it out. It is remarkable. We are living in a time when a clear parallel exists between a dramatically increasing curtain of loudness which comes with our civilization and equally dramatically increasing number of people, who suffer from Tinnitus. Now we have a concept of treatment, which prescribes for the patient exactly this increased exposure to loudness. This "noise in the brain" should be driven out with more noise into the ear.

As implausible as this new concept is in itself, it is also unable to draw upon even one recognized mechanism which is based biologically, psychologically, or theoretically to explain its premise. We cannot drive out pain with more pain; we cannot heal a diabetic by prescribing a higher consumption of sugar; we cannot heal a sick heart by increasing its work load, and we cannot heal an overloaded inner ear, which got that way through exposure to environmental loudness, by exposing this presumed brain defect to increasing levels of more noise. We can only make it worse.
There is no reasonable explanation why a presumed "incorrect learning process in the brain" is reference to an acoustic perception (Tinnitus) should be rooted out, so to speak, by continuous perception of other acoustic signals (environmental plus pink noise from the Noiser).
There is no proof or even an example thereof, where our brain learns and then unlearns something as TRT asserts.
And there is no explanation in the physiology of the brain, where the creation of an independently created noise could be healed or even helped by prescribed noise-curtain.
Lastly this premise is an insult to our nervous system. Our brains are not as stupid as TRT asserts. It does not designate the Tinnitus signal as wrong, it does not accidentally value this signal as "serious" even though, according to TRT it is "meaningless".

Why does not the brain produce "pink noise" independently?

Our brain is not wrong when it conveys to us the distress signals from our organs of hearing. Our ear is in trouble!
He who errs is the TRT practitioner.
With their Noiser, they deliver the very proof that our brain behaves differently and indeed more intelligently than they assert: Up to two years the patient is supposed to subject his ear and his brain day after day to the pink noise of the Noiser. But why does the brain not then incorporate this pink noise into an independent signal from itself?
After all, it does this with Tinnitus after 3 months, according to TRT teachings. Or do the patients actually develop this brain-derived pink noise signal, in addition to the old Tinnitus? Thankfully no!

Why do patients accept TRT?

How can it be that such an illogical concept should be accepted by so many people, experts as well as patients?
Why do they accept this concept at least for a certain time?
In order to answer this question, let us next turn to this organ, from which the TRT attempts to flee, our organ of hearing.

The inner ear reacts to continual noises

There is a mechanism in the inner ear which allows it to suppress continuous noise for a certain period of time.

This developed from early survival necessity, allowing man and beast alike to differentiate background noises such as rustling leaves during wind or rain. This mechanism works by allowing the tiny sensitive hairs on the hearing cells to stiffen and thereby actually push the background noises into the background.

Example: You go into a loud factory or tavern with a friend. You continue speaking to each other and notice that for a few minutes you cannot understand him or understand him poorly. Then after a certain amount of time has passed you can understand him better. Your ear has pushed the surrounding noise “to the rear”.
Inner ear research teaches us however, that this is an energy consuming process and tires the sensitive cells.
In nature, for which the inner ear was “designed”, absolute quiet always returns. Restperiods, in which the inner ear cells are not required to work, reduce energy requirements and allow the organs to compensate for the high level of work previously demanded of them (refer to www.dr-wilden.de).
It is different in the factory. There is no rest and naturally the affected organs of hearing become at first tired and finally overburdened. This has been firmly established by numerous international investigative studies: continuous noise exposure, irregardless of where it occurs, whether in factories, large offices, airplanes, automobiles or just plain city noises, burden and numb the ear (www.dasgesundeohr.de).

The ear of the Tinnitus patient is temporarily numbed by the pink noise of the Noiser

To numb or trick the ear is the goal which TRT seeks and tries to accomplish. The true therapeutic effect of TRT is to temporarily numb the entire inner ear, including the cells, in which the overburdened organ of hearing has sent out distress signals perceived as Tinnitus. The mechanism here may be compared to an open skin wound. If you apply pressure, you may be able to alter, even reduce pain. Or should you rub a bruise, you may be able to change or lessen the pain sensation through this additional stimulation.

A biologically frustrating process

Finally we all know this to be a biologically frustrating process, and that we do not improve the situation (open skin, bruise). Rather we can make it worse if we do not leave it be.
Just as the TRT treated patient may find his pain temporarily diluted, but the original problem, his overburdened inner ear organs, finally are pushed harder rather than relieved.

The biologically negative effect of Noiser therapy is easy to document scientifically

For this it is only necessary to compare the hearing curves of those patients treated by TRT Noiser therapy before and after completion of treatment. Thereby it is usually established that the hearing capacity of the affected patient has worsened. Also it is usually that much more notable largely, the longer the therapy has continued. Since audiometry measures the expression of inner ear biological quality, it is simple to document the negative biological effect of Noiser therapy as noted above.

Avoid quietness – a spontaneously understandable behaviour is misdirected by the TRT

But how does it stand concerning quietness, which patients with chronic Tinnitus should avoid and a million times over want to avoid?

An understandable aspect of human behaviour is either misunderstood, misdirected or simply misused by TRT. Naturally each person so affected wants this sound to go away. This is exactly what this sound wants to accomplish with our behaviour –when we perceive in that moment that our overburdened ear reports its distress, whether due to pressure, distortion, oversensivity, loss of hearing, vertigo and Tinnitus, then we should withdraw from loudness and hectic condition.

The inner ear symptoms seek to convince us to assume a biologically sensible behaviour

To retreat from loud noise and thereby reduce its negative effects on our ears is biologically sensible and a naturally correct behaviour. Exactly as we would place an overburdened joint

at rest when hearing its distress signal, we would wish not to further cause pain and allow relief to occur.

The disguising of Tinnitus by environmental noise has to be properly and biologically meaningfully interpreted for the patient

However, since Tinnitus can be covered over by environmental noise, most affected people avoid absolute quietness, in which their noises are more distinctly heard.
Instead of explaining to the patient the biological connection and allowing him to help himself, understandably afraid of quietness (because his Tinnitus seems much louder then), the TRT practitioners require their patients to avoid quietness and instead to "turn their ears outwardly" thereby increasing the surrounding environmental loudness level, the opposite of that which does the affected ear good. Basically TRT gives in to the "Pressure of the Street". It supports a senselessly incorrect behaviour for the patient, which is psychologically understandable but biologically misdirected. The overburdened organ is further burdened not only with the approval, but also at the direction of doctors, who do not seem to appreciate the resulting acute or late effects of their treatments.

The positive effect of quietness can be accomplished and experienced by each patient through self-help measures

If the Tinnitus patient uses earplugs for days, weeks and months to protect his overburdened ear organs (in traffic, in free time, on airplanes and train, etc.) he will experience over time a reduction of his tormenting symptoms. This is especially helpful with children and youthful patients certainly and generally in the acute phase of Tinnitus.
With the consistent use of self-protective measures against everyday loud noises, the natural, spontaneous power of regeneration of the inner ear cells may in some cases lead to a complete disappearance of the Tinnitus. It is different with chronic Tinnitus. Here the self-help measures must be continued considerably longer.
Still, the chronic Tinnitus may undergo thereby a regression in its pushiness an tormenting intensity over a period of time.

A well-oiled alliance of hearing aid prescribers (ENT doctors) hearing aid fitters (acoustic adaptation) and hearing aid producers have hampered a biologically correct evaluation of our hearing organs and their symptoms of distress

Why are these facts, relevant to the discussion of inner ear problems, understood by lay people, not subject to a worldwide discussion?

It is not possible to peer into the heads of those academicians. It only remains possible to observe this behaviour from the outside.

In regard to this there comes to mind the traditional therapeutic medical hand tool in the area of inner ear organs.
The oldest tool is the hearing aid.
Hearing aids are sound strengtheners.
The treatment of diminished hearing with a hearing aid comes necessarily with a biologically increased burden to the inner ear organs. No doctor enjoys telling his patient that his prescription for a hearing aid ultimately will worsen the problems intended to help. Relative to this we should examine a root of the previous association of the ENT faculties with the inner ear.
It is therefore a fact, that the best known and most prescribed treatment for inner ear exhaustion (diminished hearing is an expression of the overburdened, but previously normal-hearing inner ear) is the hearing aid, whose target organ the inner ear is forcefully and continuously biologically stressed. This should lead us to be considered stupid in regard to our handling of our organs of hearing.
Is it this alliance of hearing aid prescribers, fitters and producers which for decades has changed our highly sensitive ear into a somehow stupid, unreachable, and finally uninfluenceable organ, which can only be reached using ever more sound?
One thing is certain: in case the ENT academic world further denies the biological realities in favour of a one-sided therapy strategy, indeed even promotes arbitrarity false information relative to the nature of the inner ear, then people far and wide will slide into an increasing position of having thin hearing organs overburdened and taken advantage of.

The Dangers of TRT

Every chronic noise effect leads to arbitrary biological demands in our inner ears and finally to an overburdening of the structures found there. We have a world wide inner ear investigation, which knows exactly, that hearing in man and animals is always connected to a biological process requiring work. Hearing is like every other bodily function and sensual perception in that it is bound to energy-consuming cellular work (www.dr-wilden.de).
It is general knowledge that work processes in the indicated organs are performed by the cellular components of these organs.
It is also general knowledge, that these cells, as well as our entire organism, cannot continue to work endlessly and without limits, and from this it is also general knowledge, that each organ (as well as its cells) has a certain capacity for endurance. Clearly then, each of our organs can be overstressed beyond its capacity and therefore overburdened.
This should be clear to everyone.
Only in relation to our hearing process does it seem, that no official, personal, medical and academic consciousness exists. There appears to be a general blindness and deafness to the fact, that hearing is a clearly, biologically describable process, bound to an organ which is responsible, the inner ear, and bound to the fact, that this organ, as with all other organs, reacts to an overstepping of its endurance by sending out distress signals. Further it is even so clear, that these signals are intended to make their possessor aware of this present overburden, in the hope (from our organs) that we will so change our behaviour as to permit countermeasures to this threat.

The TRT pushes this general uncertainty regarding the nature of our hearing organs to the utmost

With our hearing organ everything is different. There the organ specific information (acoustic signals) can only derive from the organ itself. The distress signal could indeed come from the neck spinal column, from the jaw joint, from teeth, from a displaced pelvis, from kidneys or even, as TRT asserts, from a defect in the brain.
The TRT pushes its general uncertainty with its confusing and unsupported concept regarding the nature of hearing and its organs, the inner ear, unscrupulous to the top.

Therein lies the unbelievably high potential for danger of TRT for each patient and for the general public, in my experience and opinion.
That this is no exaggerated opinion is shown by a current press report*, according to which doctors wish to implant one or more electrodes into the brain of someone who has Tinnitus from a randomly overburdened inner ear.

* 1 Frankfurter Allgemeine Sonntagszeitung 27.04.03, Nr. 17, St. 58 „Wenn das Gehirn Sturm klingelt“ / Der Spiegel, Nr. 26 / 21.06.04

More informations you find on www.dr-wilden.de and www.dasgesundeohr.de and www.naturheilpraxis-lasertherapie.de.