Origins and Development of Ear Acupuncture: A Non-Meridian Therapy

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Therapeutic needling of the outer ear was developed in France about sixty years ago and then incorporated into Chinese medicine. Here is a description of its origin (bracketed information has been added for clarity):

> In the 1950's, Dr. Nogier [Paul Nogier, M.D., 1908-1996] noticed a strange scar on the upper ear of some of his patients. He found that all of them had been treated for sciatica pain by a local lay practitioner. This woman [Madame Barrin] had cauterized a specific area of the external ear in order to relieve their low back pain. Dr. Nogier conducted a similar procedure on his own sciatica patients and found that their back pain was also reduced. He then tried other means of stimulating this "sciatica point," including the use of acupuncture needles, and found that they too were effective in alleviating sciatica pain. The brilliance of Dr. Nogier was in extending this one observation into a more comprehensive model. Dr. Nogier theorized that if an area of the upper external ear is effective in treating low back pain, maybe other parts of the ear could treat other parts of the body. The ear is said to represent the whole anatomical body [in miniature; a small bodily form is sometimes called a homunculus], but in an upside down orientation.

This is the birth of ear "acupuncture" (or auricular acupuncture), which was adopted by the Chinese about a decade after Nogier explained his concept to a European audience. The Chinese claimed that they had already anticipated this development, by virtue of having statements in ancient texts indicating a connection between the ear (auditory function) and internal organs, such as "the heart opens in the ear" or "the kidney communicates with the ear," though the primary implication of such statements was that these organs were related to the function of hearing rather than to the outer ear structure. The Chinese name given to ear acupuncture is *Er Zhen Liao Fa* (ear acupuncture treatment method).

Unfortunately, many Chinese texts mislead readers into thinking that ear acupuncture is of ancient origin, is from China, and is something that simply had been popularized in the west. In one of the early English language acupuncture books produced in China, **Essentials of Acupuncture** (1980), ear acupuncture is placed in the appendix, a location relevant to its actual status as a new addition. In a completely disingenuous manner, the authors of this text claim that ear acupuncture is based on ancient Chinese principles going back to the ***Nei Jing Su Wen*** (ca. 100 A.D.) because of the relationships established there between the internal organs and the auditory function. In fact, ear acupuncture is not affiliated with the auditory function but involves the cartilage of the outer ear having a geographic relationship to other parts of the body. There is a slight admission of outside influence in the book's introduction to this method: "Since China's liberation, medical workers in accordance with Chairman Mao's instruction 'Make the past serve the present and foreign things serve China' have inherited and promoted traditional Chinese medicine while also studying foreign materials for making a comprehensive study of ear acupuncture." This text makes no mention of Nogier, though it is evident that the associations of points with parts of the body are largely consistent with Nogier's homunculus model (which is not a Chinese way of mapping meridians). In the auricle chart produced by China (see chart end of the article) the points are accompanied by names for or images of the body parts associated with them, not overtly showing an inverted human form.

In a 1974 text translated to English as **Acupuncture: A Comprehensive Text**, after attempting to point to ancient sources as a rationale for ear acupuncture, brief acknowledgement of Nogier as the source of "serious attention to auricular needling" is offered, while proclaiming Chinese work in developing the ear points chart:

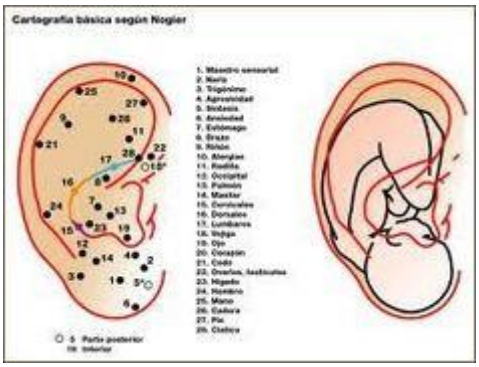
> ….As a comprehensive system of diagnosis and treatment, however, ear acupuncture is of recent origin. A French physician by the name of Nogier, writing in a German acupuncture periodical in 1957, first drew serious attention to the correspondences between specific sites on the auricle and other parts of the body. After years of careful observation relating points of tenderness, reduced electrical resistance, morphological and coloration changes on the ear to disease

elsewhere in the body, more than 200 sites were charted on the auricle by Chinese medical workers…."

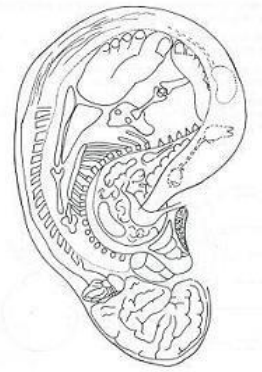
The editors of this influential book felt compelled to clarify in a footnote that prior Chinese acupuncture literature did not involve the auricle, observing that: "ancient practitioners did not place even one of the 365 traditional points on the auricle itself."

The widely used Chinese text (published also in English) **Chinese Acupuncture and Moxibustion** (1987) also attempts to point to ancient Chinese medical passages, such as in the ***Ling Shu,*** suggesting the origin of ear acupuncture. The statements found therein could only with considerable imagination be thought to relate to the ear in treatment, but really have nothing to do with what is now understood as ear acupuncture. The fact is, this method was absent from Chinese medicine apart from possibly lancing a swollen bluish vessel that might arise in the outer ear (usually on the back side of the ear), while the connection of hearing to various underlying conditions, such as that of the kidney, has no relationship to the point elaboration on the outer ear.

In the English language *Journal of Traditional Chinese Medicine*, one of the earliest clinical reports involving ear acupuncture was for the treatment of gallstones, appearing in 1986. The acupuncturists applied vaccaria seeds to the outer ear, held in place by adhesive plaster, so that the patient could press them to give stimulus several times per day. Here is their sole description of ear acupuncture itself: "The selection of points over the ear was based on the traditional Chinese medicine theory of the viscera and bowels and that of the channels. According to the principles of simultaneously selecting points in channels that are exterior-interiorly related, points in synonymous channels, and points on the front and on the back of the auricle, points were selected so that forces from different sources could be mustered…." The impression one would get is that this approach is entirely integrated with the long-standing Chinese tradition. The avoidance of acknowledging the original source has been enforced to the point that many people think it is an ancient Chinese medicine practice, one that might have been adopted by foreigners, such as Nogier.



In the 1988 **Practical English-Chinese Library of Traditional Chinese Medicine** volume on Chinese Acupuncture and Moxibustion, though there is no acknowledgement of the work of Nogier, it is stated that "The auricle is just like a fetus with the head downwards…," an idea from Europe. "Homunculus" is actually a term for a miniature adult form, and the upside down fetus (curled up as during pregnancy) is what was actually presented by Nogier originally (see image of Nogier chart left); the fetal form was later distorted to fit the point locations settled upon (modified version right). Ear acupuncture initially included points correlated with body *parts*, using the inverted fetus as a model, then proponents of this method added points that were unrelated to traditional Chinese medical thinking and non-specific in bodily location, such as "sympathetic" or "endocrine," and for disorders that are not localized, so that there is an "urticaria" point and a "hypertension" point. *Shen men*, possibly the most frequently needled of all the ear points and utilized especially for calming effects, is located near points for the pelvis and knee and near the point for hepatitis in the Chinese chart. That is to say, its location is not related, as one might expect, to the location of the heart in the homunculus depiction.



The effort to appropriate European therapeutic needling of the ear continued in China, and to this day Chinese publications imply that it is part of the long-standing Chinese tradition. For example, the 1997 **Advanced Textbook on Traditional Chinese Medicine and Pharmacology** volume on acupuncture and moxibustion claims that "The idea that the auricle is closely related with other parts of the body through meridians was mentioned in ancient Chinese medical works. Doctors of later generations have developed ear acupuncture on the basis of this idea as well as through clinical practice and researches."

But, in fact, ear acupuncture is an example of a technique developed *apart* from Chinese medicine and then incorporated into its "living tradition," so that going forward, starting in the late 1980s, acupuncture books and articles written in China would incorporate ear acupuncture points in discussion of treatment strategies as an ordinary aspect of acupuncture therapy. Still, the method is usually seen as a separate division of the acupuncture field, and in acupuncture texts it usually has a secondary place, presented *after* traditional acupuncture and lacking reference to the long-standing tradition except for the introductory claims intended to suggest an ancient origin (existing prior to Nogier's development of this field). Many times, treatment with ear acupuncture is as an addition to standard meridian therapy.

The founding of NADA (National Acupuncture Detoxification Association) in 1985 placed the practice of ear needling in the U.S. as a *primary* therapeutic method, using the technique for a western concept of "detoxification" from addictive drugs. This approach arose from the work at the Lincoln Recovery Center in the South Bronx (New York), under the direction of Michael Smith, M.D., D.Ac., where his group had "spent 10 years developing the basic five points NADA protocol for the treatment of addiction…" From that base, ear acupuncture has been adapted to treat other kinds of addictions (e.g., obesity due to over consumption of food) and especially to treat stress, which was one of the symptoms that characterized withdrawal from addictive substances and from habitual behaviors; stress made return to fulfilling the addiction more likely. In this approach, where body points on the standard meridians might be dispensed with, all of the Chinese medicine courses that usually need to be completed in order to become an acupuncturist (e.g., basic theories of Chinese medicine, meridians, and organ system functions) are rendered unnecessary except for the clean needle technique and then addressing the peculiarities of inserting needles into the cartilage of the outer ear, which differs in nature from the skin over muscle where many traditional points are located. While Nogier found that acupuncture needles were an adequate stimulus to get the desired clinical result (less damaging than the original cauterization), acupuncturists quickly adopted other methods of stimulus, from pressing pointed vaccaria seeds to tiny needles that are attached to tape (sometimes called press needles), with or without magnets, and magnets with or without tiny needles, and little pellets (magrain), which were said to supplement if they had a golden coloration but to drain excess if they had a silvery color. Though needling the ear points during a routine acupuncture session and removing the needles at the session's end is one approach, when ear acupuncture is deemed primary, the common method is to apply something that can be retained for a day or more and stimulated from time to time by the patient.

The various non-needle stimulus methods might be applied by individuals who have had little or no training in use of needles. Using needles only for the ear can require limited hours of training compared to full study of acupuncture. Some acupuncturists, especially NADA protocol enthusiasts, began speaking more than two decades ago about training hundreds or even thousands of technicians who would be able to apply a stimulus to the five points (5NP; 5 Nogier Points, see photo left, point chart end of article) that were routinely used in a treatment (sometimes a subset of three points is deemed sufficient, referenced as 3NP: liver, kidney, and *shen men*). The large number of technicians could, it was posited, solve a substantial part of the addiction problems of America by offering widespread treatment, freeing up jail cells through diversion programs and lowering recidivism rates, cutting enforcement costs, and saving people from the consequences of tobacco use and alcoholism as well as narcotics, thereby propelling ear acupuncture into the mainstream, and perhaps bringing traditional acupuncture with it. Some acupuncturists have objected to allowing ear acupuncture technicians doing this, but the recent opioid addiction crisis has put pressure to go ahead with a broad ear acupuncture program (see sample news article on the debate and progress, appendix).

NADA-trained acupuncturists from the U.S. have already set-up several ear acupuncture programs in foreign countries to treat post-traumatic stress disorder, relying on non-acupuncturist technicians. For example, a NADA treatment program in Haiti was launched after the major earthquake of January 2010; the initial

program involved 26 trainees described as "community workers, doctors, nurses, medical students, psychology students, and community leaders." The training involved three days, for which much of the first day was disrupted by difficulties with erratic participation of the translator. At the end of the three day session, a ceremony provided certificates and acupuncture supplies to the 24 trainees who completed the program. In Juarez, Mexico, a NADA program for PTSD and addiction "detox" has had good reception there and its organizers now aim to train local ear acupuncturists to be able to then train others in ear acupuncture, thus allowing expansion of their treatment levels. The initial trainees in Juarez, with American acupuncturist instructors, included addictions treatment providers, psychologists, women health promoters, and pastoral workers.

With some additional information about point locations and indications, ear needle technicians with diverse backgrounds could likewise be directed in selecting ear points for other health problems while relying on the same simple training. This is because the basic methods of stimulating points would be the same when utilizing other points on the outer ear and the primary required additional knowledge is point location, assisted by charts and brief verbal descriptions of how to find the points through examining anatomical structures of the ear.

Evaluations of NADA Ear Acupuncture

How well does ear acupuncture work? It is difficult to evaluate this technique's efficacy because of the tendency to combine ear acupuncture with other methods for treating physical ailments (such as gallstones); when treating stress disorders, the placebo effect can be very large. The act of sitting or lying down for a period of time while needles are in place, regardless of needle location, can have its own calming effect, while participation in a program—committing to showing up at a treatment location regularly, being treated for a defined problem with a specified protocol, interacting with the personnel, being aware of others doing the same—can have a beneficial outcome for people struggling to stay away from a harmful practice, such as taking illicit drugs. The problems of evaluating ear acupuncture efficacy were reviewed in 2003 (nearly 20 years after the NADA organization was founded), following examination of existing published studies; the abstract reads (1):

> Acupuncture, in the form of insertion of needles bilaterally in the outer ears, is widely used for the treatment of addiction in the US. However, support for this form of treatment from controlled studies has not been consistent. This article examines recent clinical trials of acupuncture for addiction treatment, with a goal of conveying to the reader some of the complex issues involved in conducting studies in this area. Acupuncture trials in addictions frequently have been conducted without preliminary dose-ranging studies to establish efficacious doses of the experimental treatment, use needle insertion controls of unknown degrees of activity, and present no rationale for the type or intensity of concurrently offered psychotherapy. At the present time, it is premature to put forth recommendations for or against acupuncture for the treatment of addiction based on evidence from extant studies.

In this case "dose" and "degrees of activity" relate to frequency of applying the stimulus, intensity of the stimulus, and frequency of self-stimulation of retained objects on the ear points. Many people being treated for addictions get some sort of simultaneous assistance, such as psychotherapy or other counseling, which is itself a major source of variability. Ideally, a large controlled study would be conducted. When such studies have been done, and they are few, ear acupuncture using selected points, versus using random points, versus other methods of addressing the addiction problem generally all yield the same results. The most recent such trial (published 2016) had this abstract conclusion (2):

> No evidence was found that acupuncture as delivered in this study is more effective than relaxation for problems with anxiety, sleep or substance use or in reducing the need for further addiction treatment in patients with substance use problems and comorbid psychiatric disorders. The substantial attrition at follow-up is a main limitation of the study.

Another study focusing on anxiety and stress during withdrawal from addictive drugs led to this conclusion (3): "The NADA protocol was not more effective than sham or treatment setting control in reducing anxiety. The widespread acceptance of auricular acupuncture in the treatment of addiction remains controversial." The reference to treatment setting control is the idea of using as a control group people who enter into the treatment setting but do not receive the actual ear acupuncture therapy.

The largest study involved over 500 patients suffering with alcohol dependence; the study set-up was (4): "Patients were assigned to either specific acupuncture, nonspecific acupuncture, symptom based acupuncture or convention treatment alone. Alcohol use was assessed, along with depression, anxiety, functional status, and preference for therapy." The conclusion was: "There were few differences associated with treatment assignment and there were no treatment differences on alcohol use measures, although 49% of subjects reported acupuncture reduced their desire for alcohol. The placebo and preference for treatment measures did not materially affect the results. Generally, acupuncture was not found to make a significant contribution over and above that achieved by conventional treatment alone in reduction of alcohol use." In a 2012 review article on acupuncture and opioid addiction it was concluded (5): "After 35 years of active research by both Asian and Western scientists, this review cannot be used to establish the efficacy of acupuncture in the treatment of opiate addiction because the majority of these studies were classified as having low quality."

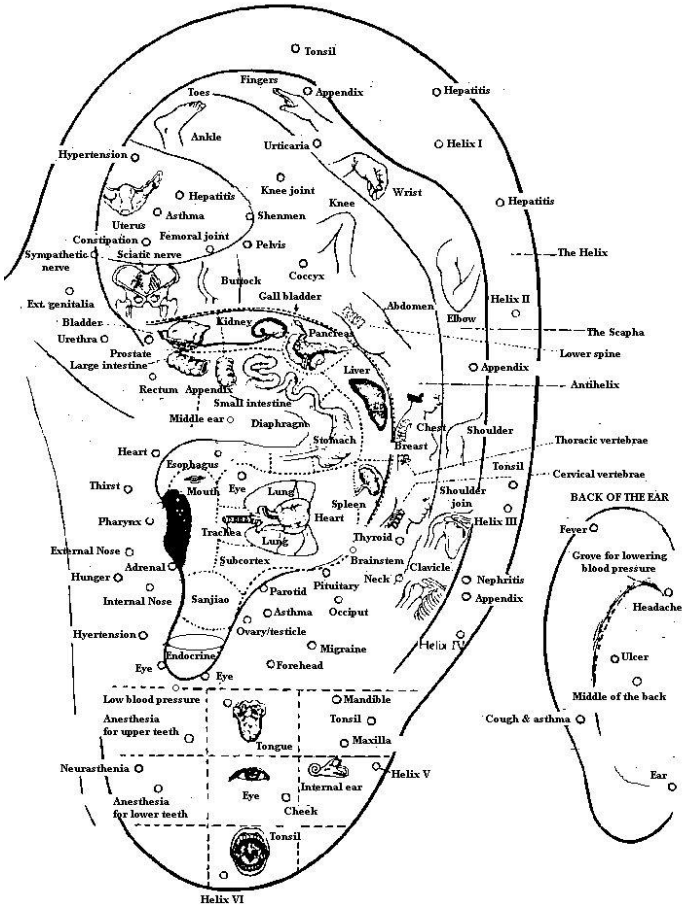
While acupuncturist proponents have produced and/or relayed studies that seem to show a benefit of ear acupuncture for addiction, stress reduction, and the like, study design and interpretation were usually problematic. Thus, one reviewer of the literature noted (6): "Proponents say ear acupuncture alleviates acute opiate withdrawal, reduces craving for all substances, and helps retain patients in treatment. Over 25 years of clinical experience has supported this claim, but scientific research has been sketchy, complicated by technical difficulties and often poorly designed." Even a strong proponent of acupuncture, Attilio D'Alberto, reviewed trial data, he noted (7): "This review could not confirm that acupuncture was an effective treatment for cocaine abuse." Nonetheless, he considered that: "the NADA protocol of five treatment points still offers the acupuncturist the best possible combination of acupuncture points based upon Traditional Chinese Medicine." As described above, these points are *not* based on traditional Chinese medicine, but, instead on Nogier's work in France complemented by Smith's work in the U.S., experimenting with different points.

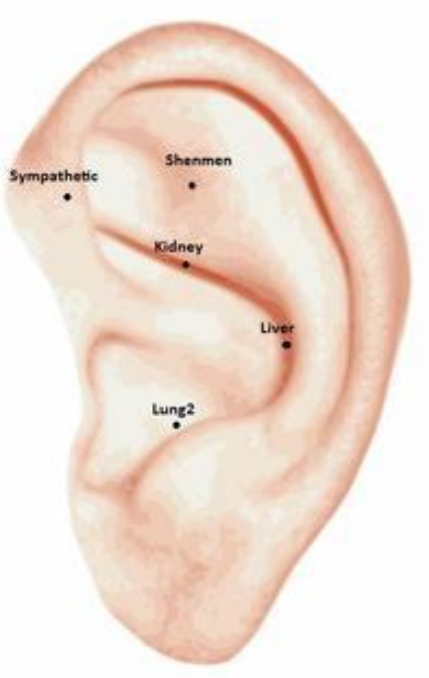
When controlled trials are conducted, the benefit of ear acupuncture is seen to be primarily participatory rather than specific to the treatment. That is, being enrolled in the trial and having participation in a program provides certain benefits whether the NADA protocol is followed, or general needling, or symptom specific needling, or non-acupuncture methods. Practitioners can expect patients being treated by ear acupuncture to respond favorably, especially for calming agitation; they cannot properly claim that the specific points selected are directly responsible for the benefits. It is important to note that these studies do not contradict a possibility that during the treatment and for some time afterward, an improvement in mood and sense of lowered craving is superior with stimulus to actual ear acupuncture points than sham points. But it is increasingly clear that the studies indicate that there are not specific prolonged effects on addiction, anxiety, and other stress conditions being treated by the NADA protocol compared to treating other points or using entirely different methods of treatment.

It is possible that the NADA points are locally more comfortable, more tolerable for the patient, than most other points so that when practitioners insert the needles, a positive response is more likely to be reported. This positive response may not have a *specific* effect on addiction or anxiety, but should encourage repeated participation, which is necessary to carry out an effective withdrawal from addictive substances. Thus, rather than finding "addiction-alleviating" or "stress-alleviating" points, the workers at Lincoln may have found points of easy tolerance that encouraged repeat visits. Then, when a formal trial comparing these points to others is undertaken where individuals are *expected* to make the repeat visits as a condition of their participation, the unique effects are not seen. Such an explanation would support both the observation of positive effects in clinical practice and lack of confirmation from trials. D'Attilo's claim that these points "are the best possible combination" despite lack of data supporting that conclusion, is not contradicted.

Interestingly, with ear acupuncture launched as a treatment for sciatica, in a review of acupuncture studies directed at sciatica treatment, for which it was concluded that acupuncture did help with sciatica pain, ear acupuncture was not mentioned, and among the better studies reviewed, not included in the treatment protocol (8).

In **Acupuncture: A Comprehensive Text**, the explanation for the popularity of ear acupuncture is stated this way: "The range of indications in ear acupuncture is broad, the method is relatively simple and economical, and there are few side effects. For these reasons, ear acupuncture has become increasingly popular both in China and abroad." The authors do not rely on effectiveness as a reason for the attraction to ear acupuncture. A challenge for those working in the west, knowing that participation in a treatment program of ear acupuncture for stress and addiction can be effective (even if not more so than some other methods), is keeping it economical. When ear acupuncture sessions are offered in a private practice setting, costs can become high. "Community acupuncture clinics", where cost containment is a major strategy (which may include short sessions, ear acupuncture only, and group treatment rooms) can provide ear acupuncture at a low cost. Nonetheless, those suffering from severe emotional distress and those involved with addiction may have such limited financial resources as to make the community acupuncture setting beyond reach, so that funded programs are necessary if a large range of needy individuals are to be served.





Ear Acupuncture Chart from China (Essentials of Acupuncture) Five NP Locations

Appendix. June 25, 2017, New Hampshire Union Leader, article by Kevin Landrigan

MANCHESTER - An innovative treatment for those with opioid addiction - ear acupuncture - took a giant step forward last week with legislators embracing a partisan compromise that will allow recovery workers on the front lines to deliver this treatment.

Supporters praise House and Senate leaders from both political parties for rejecting a late move by the state's acupuncture licensing board to place restrictions they say could have rendered the reform useless.

Ear acupuncture to treat addiction to heroin or fentanyl, also known as auricular acupuncture or acu-detox, is one treatment that practitioners insist can help recovering addicts deal with the painful symptoms of withdrawal and the accompanying stress.

Starting July 1, New Hampshire will join nearly two dozen states that allow this; New Hampshire advocates say the legislation here could become a national model.

“We could be trendsetters for the nation. With this bill, we have more flexibility, we have seen the mistakes other states have made in setting this up and have learned from them,” said Elizabeth Ropp, a licensed acupuncturist in Manchester.

The House and Senate adopted the compromise without debate Thursday.

Advocates say since 1978 acupuncture has been deployed as a way to help fight substance abuse disorder around the world and the most effective protocol is to insert five, tiny needles into each ear at specific points.

“This can calm the craving, reduce the anxiety and trauma. It doesn't work for everybody but this is really a benign option that's worth exploring for a lot of people suffering from addiction,” Ropp said.

To get certified, these specialists must complete 70 hours of classroom and clinical work under the National Acupuncture Detoxification Association program.

But the five-person Board of Acupuncture Licensing has opposed the bill from the beginning and last month the chairman of the House committee went to the Senate and urged it adopt stringent rule-making requirements.

"The draft amendment is specifically on the rule-making authority. When this bill was in the House ED&A committee, the subcommittee worked very hard on who should perform this and what the requirements should be, but the rule-making authority was somewhat sketchy," said Rep Carol McGuire, R-Epsom, and chairman of the House Executive Departments and Administration Committee.

“So the board pointed that out to me after we passed it. And so I worked out an amendment that is supported by the board of acupuncture that defines the rule-making authority, which is necessary so they can make rules for it.”

The changes would have removed “general” supervision, which effectively would require that a licensed acupuncturist had to be present whenever someone certified was doing this procedure.

“This would totally make it unaffordable. The whole way this works is to allow recovery workers to give this treatment without the administrative overhead,” Ropp said. "We convinced the Senate in the conference committee this was precisely how the acupuncture boards effectively killed these programs in South Carolina, Georgia and New Mexico."

While supporters could only find Democrats to sponsor the bill, Ropp said it only passed because GOP lawmakers got behind it.

“It was ultimately championed by Republicans, which is such a good sign,” Ropp said. “It is safer than ear piercing. Why start with something too restrictive when we have seen states botch this by making it overly restrictive.”

Acupuncture Evaluation References

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Authors Note: This article contradicts the claim that ear acupuncture is properly described as being of ancient Chinese origin and depicts it more appropriately as a non-meridian therapy originating in the west that was then further developed in China in recent decades. This consideration is important in the context of determining whether non-acupuncturists may be legally granted (under suitable guidelines) permission to make use of therapeutic needling that is not dependent on TCM training involving its historically dependent theory and practice. In pursuing the evaluation of effectiveness for this widely used technique, the literature was found to display a lack of supporting evidence. There is other literature, not referenced here, that appears to show remarkable benefits of ear acupuncture, but those reports are among the many that are deemed by competent reviewers to have poor study quality, and thus cannot adequately support the claimed therapeutic results. Ear acupuncture may provide several benefits that are of the type referred to in this article as *non-specific*, that is, the patient shows a positive response, but it has not been demonstrated that this response is directly related to needling a *specific* point or set of points nor is the patient experience of the needling readily linked to a *specific* outcome. It is possible that ear needling can have a more relaxing effect than needling some of the body points, a comparison has not been made. In general, conducting a good quality acupuncture study is not easy to accomplish; the lack of quality studies does not mean that claimed benefits do not occur, but it does mean that the claims have not been successfully verified. One cannot state authoritatively at this time that any particular ear acupuncture protocol is *proven* effective, including those extensively utilized protocols.

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