

# Rain Drop Therapy

## White Paper Raindrop Therapy

### ***Purpose and Reason for Position Statement***

The use of essential oils is an ancient practice dating back to Egypt. Like many other practices with roots in the past, it has been highly commercialized to the public. It should rightly hold a respected position in alternative, complementary health practices. In some parts of the world, such as France, it may be practiced with care and skill. However, the general public in the USA, is still in an initiate stage of understanding the use and benefits of the oils. As such, this white paper is intended to educate the consumer of essential oils and practices which they may be exposed to in their explorations. While there is a sense that because it is "natural", they are safe", this paper is intended to give you information about a practice promoted within one company. The practice is called "Raindrop Therapy", and is promoted within the Young Living Company. While this paper does not make comment regarding the company or it's product, it does take a critical stand against the use of the oils in "Raindrop Therapy".

In the USA, The National Association for Holistic Aromatherapy (NAHA) has defined standard curriculum for certification for "Aromatherapy Practitioner". There are persons performing "Raindrop Therapy" (RDT), who have not received training, observing similar curriculum standards. These public demonstrations and conferences have been presented to the general public as well as audiences of health care professionals including physicians, nurses, midwives, doulas, and massage therapists. The purpose of this paper is to assert a position **against the use of a technique** called "Raindrop Therapy" as it currently cannot be supported as a recognized aromatherapy "best practice." This position is intended to educate and inform the public as a part of the role of members of the Aromatherapy Community.

**"Raindrop Therapy" technique as developed by Mr. Gary Young is not to be regarded as a best practice because:**

- **It promotes the unsafe use of essential oils, putting people at risk of skin irritation and**
- **There is no published empirical substantiation to support its claims that RDT is a "tool for assisting the body in correcting**

## **defects in the curvature of the spine, such as scoliosis."**

### **Foundation of Conclusions**

Current research of formal testing regarding the chemical structure, per cutaneous absorption and dermal metabolism of essential oils as well as potential skin reactions, including irritation, sensitization, phototoxicity and essential oil toxicity, determines existing **standard safety guidelines**. Safety guidelines are based on the assumption that essential oils used in aromatherapy will be used at safe dilution levels for external use.

In addition to standard **dilution guidelines**, the aromatherapy practitioner must be aware of those individuals who are identified as a greater risk for developing potential skin reactions, including persons with known allergies, history of asthma, eczema, psoriasis, fair-haired, light skinned, and those with a history of multiple allergies and medical complications. (Although this procedure does not preclude sensitization, only potential irritation), "in order to avoid potential skin reactions, those "at-risk" should receive skin "**patch-testing**" at "double the concentration planned to use, prior to application of each essential oil."

There is no published clinical evidence to support that RDT has any correcting value as a tool to be used to adjust spinal curvatures caused by scoliosis, or align electric and structural elements, even if the essential oils were to be used at correct dilution levels and the individual's skin was patch-tested prior to application. Therefore, because of the unsafe use of undiluted essential oils as well as unpublished claims, "Raindrop Therapy" technique as developed by Gary Young is not supported as a "best practice."

**The discussion that follows will present a description of 1) Raindrop Therapy technique along with 2) current known safety standard guidelines regarding the dermal application of essential oils**

**used in RDT practice and 3) literature regarding unfounded claims of the rationale for use of RDT.**

### **SUPPORTING LITERATURE RESEARCH**

This position is based on the following publications, which describe the technique and claims, from the following sources in print and video, as well as information found on the World Wide Web.

**Essential Oils Desk Reference, Second Edition, 2001**

**Essential Science Publishing pg. 191-198**

**The Science and Application of Essential Oils, D. Gary Young, ND "Aromatologist", Young**

**Living Oils, (Video) 1994**

**Excerpts from Aromatherapy, The Essential Beginning by Gary Young, no longer in print. pg 1-7**

**<http://www.webdeb.com/oils/raindrop.htm>**

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***Description of Raindrop Therapy (excerpts)***

### **Step 2**

*"Next comes the application of the oils of thyme and oregano. Hold the bottle approximately six inches above the skin and let five drops of each oil drop from the bottle evenly spaced along the spine from*

*bottom to top (sacrum to atlas or 1<sup>st</sup> cervical). Try to stay in the electrical field as much as possible. It*

*does not matter which oil is applied first. Apply one oil and then layer it by gently spreading it evenly along*

*the curvature of the spine. Apply the second oils the same way. You don't need large drops, and more is*

*not better. Then apply 10 to 15 drops of the V-6 Mixing Oil to prevent any discomfort...*

*...Now apply the oils of **Cypress, Birch, Basil and Peppermint** in that order. Apply four to five drops of the first oil along the length of the spine. Layer it in by evenly spreading it with your fingertips. Then do the same with the other three. Starting on one side of the spine, gently massage the oils in along the spine. Do not work directly on the spine. Do not force it or apply direct pressure. Start at the sacrum and use the fingertips of both hands placed side-by-side, and in a circular clockwise motion, work up the side of the spine to the atlas, pushing or pulling the tissue in the direction you want the spine to move. This*

*technique helps to create a "space" for the spine to move. After finishing one side of the spine, walk around to the other side of the individual and begin on the second side starting from the sacrum working*

*up to the atlas. Repeat this two more times.*

### **Step 5**

***Pay close attention because the back can become very hot!***

*The heat will generally build slowly in intensity to where it will peak in five to eight minutes and then cool down to where it feels pleasant. The water in the towel drives the oils deeper into the skin. The more out of balance, the more virus or bacteria activity in the body, or the more inflammation in the spine, the hotter the area will become along the spine. Some people will experience no heat, for some it will be mild and very pleasant, while for others it may be hot and a little uncomfortable. Pay attention to what the person is saying. Ask questions. If it gets too uncomfortable, remove the towels and apply V-6 Mixing Oil on the back and work it in. This will usually remove the heat in minutes.*

*After putting the towels on, wait a few minutes to see how the person is responding. If the back does not become very hot, have the person roll over so the back is against the towels on the table. This usually creates more heat."*

### **Step 6**

*"Take the four oils of **Birch, Cypress, Basil and Peppermint**, in that order, and apply two to three drops of each oil along the inside of the lower legs along the shin bone from the bottom of the knee area to the top of the big toes. Apply one at a time and layer each oil in before applying the next oil. Place fingers of one hand along the inside of the shin bone just below the knee, work down to the ankle, and then along the foot up to the top of the big toe using the Vita Flex Technique. Roll your fingers up and then over onto the nails of the fingers, applying slightly more pressure at the top of the roll and releasing as you come over onto the nails. Short nails would be appreciated by the person on whom you are working. Do this*

*three times on each leg...."*

### **Step 8**

*"Have the person on the table roll back so he or she is again face down. Rest the head in the head-cradle of the massage table again and make sure the person is lying straight. Remove the towels and then examine the spine. Corrections may or may not be visible. At this point you may add another therapy as desired. Sometimes the desired results do not come immediately, and yet the body will continue to respond for days, at which time you*

*may begin to see gradual changes...*

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*This is the basic Raindrop Therapy, although there are several variations. Everybody is different, and what works for one may not work for another. Different body types respond to the applications in ways not expected. Learn to be sensitive to the person to whom you are working so that you can respond to his or her needs."*

*The question is often asked, "How long does this application last? Again, everybody responds*

*differently. Generally speaking, the level of health and proper diet are key factors, as are exercise and mental attitude. One application may last months for one person, but then for another it may be necessary to have the application done every week until the body begins to respond. The key is to retrain the body. In some cases, you will have to develop a new memory in the tissue in order for the body to*

*stay where it should be. This may take a few weeks or even a full year." <sup>4</sup>*

### **The Video Presentation Variation**

*In the video, in which Mr. Young describes the process, he uses the oils of Oregano 4 drops, and 5 drops of Thyme. He also states that if there are arthritic or compressed disks, then to use 6 drops birch, 3 drops*

*lemongrass, 4-5 drops marjoram, 4-5 drops cypress and a couple of drops of Peppermint.*

*He further goes on to explain that certain essential oils are known to be caustic to the skin, such as the citrus, coniferous and spice oils, such as clove, nutmeg. He states that these oils are OK to use neat as in drops on the spine, but for a larger area, like the whole back, to dilute them 15-30 drops to one ounce, and children and the elderly should be 15 drops to an ounce.<sup>5</sup>*

### **Notes on Description of Oils getting hot:**

*In both of his publications of RDT, Mr. Young describes the oils as "may be feeling hot on the skin"*

*While the sensation of heat and a burning is a symptom of irritation to the skin from using undiluted oils, the precautions he*

offers is in *Essential Oils Desk Reference*.

"Caution: Special care must be taken with this step (referring to allowing the heat from a wet towel to penetrate usually about 8-10 minutes). The greater the inflammation and viral infection along the spine, the hotter the area along the spine will become."<sup>6</sup>

### **DISCUSSION**

The practice of applying these essential oils undiluted to the skin is not consistent with "best practice" taught in standard curriculum for professional aromatherapy education recognized by NAHA. The use of the undiluted essential oils promoted within Raindrop Therapy, are not supported in safety manuals.

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#### **Safety Data References of Essential oils which are used in RDT:**

##### **Oregano Essential Oil**

###### **From Plant Aromatics**

*Origanum Oil:*

Family: Lamiaceae (Labiatae)

Botanical Name: *Thymus capitatus Hoffmngg.et Link*, and other varieties.<sup>7</sup>

A 2% solution of Origanum oil caused no irritation or sensitization on humans.<sup>8</sup>

###### From ***Essential Oil Safety***

Oregano (Spanish) (P)

*Thymus capitatus*, and *Origanum vulgare*, a table on page 209 list it as Moderately irritant as well as having mucous membrane irritant.

**Toxicity data and recommendations:** Undiluted oregano oil was severely irritating when applied to mouse skin, and moderately irritating when applied to rabbit skin. Tested at 2% it produced no reaction after a patch test on human subjects.

Therefore, Oregano should not be used neat as promoted in Raindrop Therapy as it can and is known to cause cutaneous irritation. As well, the dilution rate for overall use is 2%. Likewise it should not be used at all on hypersensitive, diseased

or damaged skin, and children under 2 years of age. In the Video, a ratio of 5% dilution for overall use was recommended (15-30 drops per ounce), and at 2.5% dilution rate for children or the elderly (15 drops to one ounce).<sup>9</sup>

**Raindrop Therapy promotes unsafe use of Oregano Oil on humans.**

### **Thyme Oil**

From **Essential Oil Safety**

Thymus vulgaris L.

Thymus Zygis L.

Irritation/Sensitization-Red Thyme oil-nil at 8% however when applied to animal skin undiluted it proved severely irritating.<sup>9</sup>

External applications as a rubefacient and counter-irritant include dilution with olive or other oils.<sup>10</sup>

From **Plant Aromatics**

Family: Lamiaceae (Labiatae)

Genus: Thymus

Botanical Name: Thymus vulgaris Linn. T. serpyllum L. T. zygis L.T.

mastichiria L. and dozens of other species with hundreds of varieties and cultivars, with tremendous chemical compositional variation.<sup>11</sup>

An 8% solution of Thyme oil (red unrectified) caused no irritation or sensitization on humans.<sup>12</sup>

T. vulgaris, other species and different genera, yield thymol, which can produce irritation of the skin.<sup>13</sup> Both Thyme oil and thymol have been recorded as being a cause of adverse dermal reactions including dermatitis, cheilitis and severe inflammation.<sup>14</sup>

Undiluted thyme oils were severely irritating to both mouse and rabbit skin: tested at 12% it produced no irritation on human subjects.

Again dermal cautions were noted for hypersensitive, diseased or damaged skin, and children under two years of age.<sup>15</sup>

**Raindrop Therapy promotes unsafe use of Thyme Oil on humans.**

**Birch Oil**

**From Plant Aromatics**

Family: Betulaceae

Genus: Betula

Botanical Name: *Betula lenta* Linn. and other varieties.<sup>16</sup>

A 4% solution of Sweet Birch oil caused no irritation or sensitization on human.<sup>17</sup>

A 1% solution of Birch oil applied to the skin, can cause dermal eruptions. B.P.C. 1934

Birch extracts have caused adverse reactions in up to 50% of people with an allergy to Birch pollen.<sup>18</sup>

Methyl salicylate is freely absorbed by the skin and can lead to high blood levels of Salicylic acid.<sup>19</sup>

*MANY OTHER REPORTS OF ADVERSE EFFECTS ARE RECORDED Fetal abnormalities and reduce growth rates in rats. It can pass into breast milk and therefore should NEVER BE USED DURING PREGNANCY OR LACTATION.*<sup>20</sup>

*Although Birch oil (sweet) has shown no irritation or sensitization at 4%, it is NOT RECOMMENDED.*<sup>21</sup>

*Birch Tar Oil: There are many reports in the literature about birch tree extracts causing dermatitis. This extract should not be used unless you are very confident of what you are doing.*<sup>22</sup>

**From Essential Oil Safety**

Botanical Name: *Betula lenta*

Notable salicylate 98%

Methyl salicylate can be absorbed transdermally in sufficient quantities to cause poisoning in humans. Topically applied



methyl salicylate can potentiate the anticoagulant effect of warfarin, causing side effects such as internal hemorrhage. A similar interaction is possible, but by no means certain, with other anticoagulants such as aspirin and heparin. Many liniments contain methyl salicylate or wintergreen oil.

**Comments:** There have been sufficient cases of poisoning by methyl salicylate or by oils containing it that it would be prudent to avoid use of this oil in aromatherapy. Virtually all 'sweet birch oils' are in fact synthetic methyl salicylate.

**Compare:** Wintergreen <sup>23</sup>

**Raindrop Therapy promotes unsafe use of Birch Oil on humans.**

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### **WINTERGREEN OIL**

From *Plant Aromatics* ·

Family: Ericaceae.

Botanical Name: *Gaultheria procumbens* Linn.

**This oil does not appear to have undergone formal testing for adverse dermal effects by the usual International organizations.**<sup>24</sup>

Cutaneous absorption of methyl salicylate (the major component of the oil) is rapid.

It has been detected in the urine half an hour after application to the skin. It can also cause dermal eruptions. (*AUTHORS NOTE:* There is very little genuine wintergreen oil available, as it has mainly been replaced with synthetic methyl salicylate. Due to this and the risks associated from the application of this

chemical to the skin, this product should be reserved for local application only, ideally undertaken by someone who has been trained in the use of this hazardous substance.)<sup>25</sup>.

**Contraindications:** should not be used in therapy, either internally or externally; do not use if taking anticoagulants

**Comments:** Virtually all commercial 'wintergreen oil' is in fact synthetic methyl salicylate. There have been sufficient cases of poisoning by methyl salicylate or by oils contain it that it would be prudent to avoid all use of this oil.<sup>26</sup>.

**Raindrop Therapy promotes unsafe use of Wintergreen Oil on humans.**

**Peppermint Oil**

From ***Plant Aromatics***

Family Lamiaceae (Labiatae)

Genus: Mentha with at least 25 species

Botanical Name: Mentha x piperita (Peppermint). M arvensis (Corn mint, and numerous varieties and clones of both plants.

**Peppermint oil does not appear to have undergone formal testing procedures for dermal irritation and sensitization; therefore this oil should only be used on the skin at very low levels.**<sup>27.</sup>

"Isolated incidents due to accidental or inappropriate use of the products suggest caution in the handling and application of the oil or menthol, particularly the application of the neat oil to treat rheumatism"<sup>28.</sup>

Menthol is irritant in high concentration especially if evaporation from the skin is prevented.<sup>29</sup>

Mentha piperita var. Vulgaris

Safety data: tested at low dose non-toxic, NO FORMAL TESTING on skin effects. Use diluted: possible sensitization (menthol): keep away from nostrils of infants because of risk of spasm of glottis: avoid in pregnancy, Lactation.<sup>30</sup> It has been reported that some patients with particular enzyme deficits or specific conditions may be effected by certain essential oils.<sup>31</sup>

People with G6PD ( glucose-6-phosphate dehydrogenase) enzyme-deficiency can develop a toxic build-up of menthol in the body. G-6-PD is the enzyme responsible for liver detoxification of menthol.<sup>32</sup>

**Raindrop Therapy promotes unsafe use of Peppermint Oil on humans.**

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**Basil Oil**

(Although there are safer chemotypes of Basil oil available to use, Raindrop Therapy uses the estragole chemotype<sup>33</sup>, aka: *methyl chavicol*)

**Basil** (*Ocimum basilicum* )

**Chemical constituents:** Methyl chavicol (70-75%)

*Ocimum Basilicum*: Bush Basil

Untested Oil; Avoid use on Sensitive or Damaged Skin

Safety Data, No Formal Testing-Avoid in Pregnancy, with babies, children: possible irritation: avoid sensitive skin, appears in low dose non-toxic (Methyl chavicol) is moderately toxic. Excess produces stupefying effect<sup>34</sup>

A 4% solution of Basil Oil (*O. basilicum*, *M. chavicol* circa 55%) caused no irritation or sensitization humans. Some people could react to the eugenol content of some Basil oils.<sup>35</sup>

Maximum recommended usage levels in percentage dilution:

**Basil M. chavicol 55%, 4% dilution**

The chemotype Estragole, is reported as having **70-75% methyl chavicol**<sup>36</sup>

**Raindrop Therapy promotes unsafe use of Basil Oil, chemotype estragole, on humans.**

### **Lemongrass Oil**

**Botanical Name:** *Cymbopogon flexuosus*

Botanical Family: Gramineae

Common name: Lemongrass, East Indian Lemongrass

Class: aldehyde

Notable constituents: Citral 85%, Limonene 5%

Safety Data: Possible dermal irritation and sensitization: avoid in pregnancy, with babies and children.<sup>37</sup>

**"Caution** *C. flexuosus* should never be used neat on the skin

because of its possible irritant properties, due mainly to the citral content because of its extensive root system. However, when diluted in a carrier, it is without hazard except on the most sensitive of skins. Treat with respect."<sup>38</sup>

**Cautions: (dermal) Hypersensitive, diseased or damaged skin, and children under two years of age.**

**Toxicity : Citral can cause a rise in ocular tension, which would be dangerous in cases of glaucoma.**<sup>39</sup>

There are a few reports of skin irritation caused by hypersensitivity or prolonged exposure to the concentrated oil and sensitization may occur.<sup>40</sup> Vesicular dermatitis appeared in eight workers exposed to a cargo of Lemongrass oils and the NEAT oil is a skin irritant.<sup>41</sup> *Recommended dilution is at 4-5%*

**Raindrop Therapy promotes unsafe use of Lemongrass oil on humans.**

### **Cypress Oil**

**Botanical Name:** *Cupressus sempervivens*

**Botanical family:** Cupressaceae

**Common name:** Cypress

Safety Data: Tested at LOW doses non-toxic, non-irritant and non-sensitizing; avoid in pregnancy, high blood pressure, and with cancers, uterine and breast fibrosis.<sup>42</sup>

A 5% solution of Cypress oil caused no irritation or sensitization on humans,<sup>43</sup>

**Raindrop Therapy promotes unsafe use of cypress oil on humans.**

### **Marjoram Oil**

**Botanical Name:** *Origanum marjorana* Linn. also *Marjorana hortensis* Moench.

**Botanical family:** Lamiaceae

A 6% solution of Sweet Marjoram oil caused no irritation or

sensitization on humans.<sup>44</sup>

Tested at low dose non-toxic non-irritating, non-sensitizing.<sup>45</sup>

### **Raindrop therapy promotes the unsafe use of marjoram oil on humans**

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#### **Tansy Oil**

*"Blue Tansy" oil is listed as an ingredient in Raindrop Therapy's "Valor" blend<sup>46</sup>, and given the botanical name Tanacetum annuum, which, according to Sheppard-Hanger, is the botanical name for Moroccan Chamomile, also known as Blue Atlas,<sup>47</sup> not Blue Tansy. Because of the contradictory*

*essential oil profile in G. Young's book, Essential Oils Desk Reference, it is unclear which essential oil G. Young has included in the blend, "Valor". For safety purposes, tansy oil will be outlined below.)*

**Botanical Name:** *Tanacetum vulgare*

**Common name:** Tansy Oil

**Botanical family:** Compositae

**Notable constituents:** Thujones 66-81%, Camphor 5%

**Contraindications:** Should not be used in therapy, either internally or externally.

**Toxicity data & recommendations:** Toxic signs produced by tansy oil poisoning include: convulsions, irregular heartbeat, vomiting, rigid pupils, gastroenteritis, uterine bleeding, flushing, hepatitis, cramps, loss of consciousness and rapid breathing.

**Comments:** **In light of its high thujone content, tansy oil should be avoided altogether in aromatherapy.**<sup>48</sup>

Some Tansy oils contain very high levels of  $\beta$ -Thujone which orally is extremely toxic and which does seem to be absorbed through the skin.<sup>49</sup> On the other hand some tansy oils contain no or insignificant amount of this chemical so until such time as full analysis is declared on essential oils, it is wiser to avoid its use for application to the skin, or for room fragrances.<sup>50</sup>

No Formal Testing- Avoid in Pregnancy with babies, children best

to avoid as untested, substitution and doubtful production.<sup>51</sup>

### **Raindrop Therapy promotes the unsafe use of "Tansy" oil on humans.**

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#### **Discussion regarding the unfounded claims of Raindrop Therapy**

Examination of the published literature on the rationale for the use of Raindrop therapy, written or published by Gary Young rationalizing the use for Raindrop Therapy, has implies that the process has a curative effect on scoliosis:

#### **Excerpts verbatim from *Essential Oils Desk Reference* by G.Young:**

- *Raindrop Technique is a powerful, non-invasive tool for assisting the body in correcting defects in the curvature of the spine. During the years that it has been practiced, it has resolved numerous cases of scoliosis and kyphosis and eliminated the need for back surgery for thousands of people.*
- *Raindrop Technique originated in the 1980's from the research of D. Gary Young working with a Lakota medicine man named Wallace Black Elk. It integrates Vita Flex and massage, utilizing the power of essential oils in bringing*

*the body into structural and electrical alignment.*

- *Raindrop Technique is based on the theory that many types of scoliosis and spinal misalignments are caused by viruses or bacteria that lie dormant along the spine. These pathogens create inflammation, which, in turn, contorts and disfigures the spinal column.*
- *Raindrop Technique uses a sequence of highly antimicrobial essential oils designed to simultaneously reduce inflammation and kill the responsible viral agents.<sup>52</sup>*

### **" Scoliosis"**

(discussion on etiology of scoliosis from the writings of Young)

*While a few cases of scoliosis can be attributed to congenital deformities (such as MS, Cerebral Palsy, Down's Syndrome, or Marfan's Syndrome), the vast majority of scoliosis types are of*

*unknown origin.*

*Some medical professionals believe that many cases of scoliosis begin with hard-to-detect inflammation along the spine caused by latent viruses. Others believe that it may be due to persistent muscle spasms that have pulled the vertebrae off the spine out of alignment.*

The Raindrop Technique **is one of the most effective therapies for straightening spines misaligned due to scoliosis.**"<sup>53</sup>

**Excerpts from: The Science and Application of Essential Oils, D. Gary Young, ND " (Video) 1994**

Statements on tape by G. Young

"Raindrop Therapy is a technique that is beneficial for back problems, scoliosis, deteriorated disks and compressions".<sup>54</sup>

The following section provides samples of information found on the World Wide Web describing Raindrop Therapy.

1. *"The Raindrop Therapy combines the science of aromatherapy with the techniques of Vita Flex, reflexology, massage, etc., in the application of essential oils, which are applied on various areas of the body to bring structural and electrical alignment. Thyme has been scientifically proven to be anti-infections, antibacterial, and antiviral.*

*There is some indication that scoliosis is the result of some viral and or bacterial activity that has taken place in the body at some point before the scoliosis began. These essential oils can easily penetrate the body and may help kill any virus or bacteria that may be present.*"<sup>55</sup>

2. *"The Raindrop Therapy combines the science of aromatherapy with the techniques of Vita Flex, reflexology, massage, etc., in the application of essential oils, which are applied on various areas of the body to bring structural and electrical alignment.*"<sup>56</sup>

3. *"Raindrop technique is a powerful, non-invasive tool for helping to correct defects in the curvature of the spine. It has resolved numerous cases of scoliosis and eliminated the needs for back surgery for thousands of people. Raindrop technique is based on the theory that many types of scoliosis and spinal misalignments are caused by virus or bacteria that are dormant along the spine. These pathogens create inflammation which in turn controls and disfigures the spinal column. Raindrop Technique uses a sequence of highly anti-microbial essential oils*

*designed to simultaneously reduce inflammation and kill the viral agents responsible for it.*"<sup>57</sup>

There are numerous other references like these on the World Wide Web and a simple search using the term "Raindrop Therapy" would yield many more. *This information either implies or states, that the use of Raindrop Therapy, has either a corrective action on scoliosis or that it benefits person, with scoliosis, or that is somehow otherwise helps to bring the body into structural or electrical alignment.*

Now let's turn our attention to what qualified authorities on the topic of scoliosis, have to say about the etiology of scoliosis.

### **Literature search on Scoliosis**

**Scoliosis:** A rotary lateral curvature of the spine.

**congenital s.** Scoliosis resulting from malformation of the spine or chest.

**idiopathic s.** Scoliosis of unknown cause.

**myophthi. S.** Scoliosis due to weakness of the spinal muscles.

**Neuromuscular S.** Scoliosis caused by any of various diseases affecting the motor nerve cells.

**Osteopathic s.** Lateral curvature resulting from pathologic conditions of the vertebrae, such as tuberculosis, rickets, osteomalacia, and tumors

**Static s.** Scoliosis due to difference in the length of the legs<sup>58</sup>

The focus of the search for whether one might give credibility to the rationale for the use of RDT lies in examining idiopathic scoliosis, as it is the only type, which is of "unknown cause". An inquiry to the NSF (National Scoliosis Foundation, questioning Young's theory of a "dormant viral or bacterial etiology" for idiopathic scoliosis prompted the following reply:

E-mail Response from **National Scoliosis Foundation** (Oct 22, 2001 on file):

*"Thank you for writing the NSF. Unfortunately, I have not read anything about the statement. There are a few helpful websites that we can refer you to for information regarding scoliosis. The addresses are [www.spineuniverse.com](http://www.spineuniverse.com), [www.iscoliosis.com](http://www.iscoliosis.com), [www.aaos.org](http://www.aaos.org), [www.scoliosis.org](http://www.scoliosis.org). These sites have much information as well as links to other*



sites."

- Note: a search of these sites yields no mention of the dormant virus theory. There is a consistency across these sites that idiopathic scoliosis shows strong evidence of being hereditary. The following are representative of findings.

From **The Genetics of Scoliosis** by John T. Smith, M.D.:

*"Despite a tremendous amount of scientific research, the cause of some type of scoliosis remain largely unknown. Adolescent idiopathic scoliosis may be a disease that is inherited as a genetic trait, much like some other diseases, such as sickle cell anemia. The gene that causes scoliosis remains undiscovered, but scientists are trying to find this gene using new techniques for analyzing genetic inheritance. Defining the role of genetic in scoliosis is currently the focus of intense research at a number of Academic centers throughout the world.*

*"There is strong evidence that an abnormal gene is partially responsible for some forms of scoliosis. It is possible that genetic factors may influence important aspects of scoliosis such as the pattern of curvature (left versus right curves), the shape of the curve, and the risk of progression. The tendency for scoliosis to appear in people who are closely related, such as mothers and their daughter, identical twins, and the first-degree relatives, suggest that scoliosis can be inherited. ..."<sup>59</sup>*

From **National Institutes of Health:**

*"Researchers are looking for the cause of idiopathic scoliosis. They have studied genetic structural and biochemical alterations in the discs and muscles and central nervous changes. The changes in the discs and muscles seem to be a result of scoliosis and cause. Scientists are still hopeful that studying changes in the central nervous system with idiopathic scoliosis may reveal a cause of this disorder."<sup>60</sup>*

### **Treatment of Scoliosis**

From **Scoliosis Research Society:** Bracing may be a consideration in children with spinal deformity and curve magnitudes of 25-40 degrees. The primary goal is to stop curve progression. Surgery for idiopathic scoliosis is suggested when curve magnitude is 50 degrees or more. Curves are measured in degrees and persons with curves measuring under thirty degrees entering adulthood are considered having a mild curve while those over 60 degrees are considered severe.<sup>61</sup> \_

### **What Does NOT demonstrate effectiveness**

Both of these sources, also state " Numerous studies have failed

to show any benefit from exercise, manipulation, meditation or drugs.<sup>62</sup>

There is no scientifically documented role for exercises, manipulation or electrical stimulation in the management of scoliosis.<sup>63</sup>

Some people have tried other ways to treat scoliosis, including manipulation by electrical stimulation, dietary supplements and corrective exercises. So far studies following treatments have not been show to prevent curve progression<sup>64</sup>...

### **How is Scoliosis Measured?**

The standard measurements for scoliosis are done through X-ray evaluation, Curve measurement, and MRI.

### **Summary of Points**

- **Idiopathic Scoliosis** is of an unknown cause, but current thinking is that it may be hereditary and genetic in etiology.
- Review of the leading organizations doing research on idiopathic scoliosis reveals no dormant viral or bacterial theories.
- Research has demonstrated no significant impact of exercise, manipulation, diet supplements or electrical stimulation has any effect on stopping the progression of idiopathic scoliosis.
- Objective evaluation of scoliosis is done with X-rays, degrees of measurement, and in some cases MRI.

### **Proof of Claims in Effectiveness of Raindrop Therapy on Scoliosis?**

- Thus far we have shown that there is no support of a viral/bacterial theory which is the underpinning of the use of RDT for claims of benefits to idiopathic scoliosis and alignment
- Nor does manipulation of the spine benefit idiopathic scoliosis.

But let us suppose for a moment that we suspend our concerns about etiology and standard treatment of scoliosis. Raindrop Therapy does not have any published scientific proof of their claims. Although the proponents of RDT say that it has benefited "thousands of people", there are no citations to published scientific studies of these claims within any of the RDT referenced literature or in our broad search of the practice. There is no reference to any published clinical research using known data measurements (i.e. X-rays, degrees of curvature, or

MRI.).

### **Scope of Practice**

It must also be noted that within any profession there is a scope of practice which is to be observed. These are governed by state laws. While persons may be practicing under a medical license, using essential oils, persons using and training Raindrop Therapy, require no licensure. As well, although they may be trained in massage, for example, this does not necessarily include training as an Aromatherapy Professional.

Raindrop Therapy requires "hands-on" application of essential oils, massage, and manipulation of the back. Each state has individual legal requirements and definition of a scope of practice, determining qualification to use hands-on techniques required with this RDT practice. The use of essential oils are often integrated within an existing therapeutic practice (e.g. nursing, massage therapy, esthetics, OT, PT, Chiropractic, Orthopedic, M.D.). Therefore, we urge the consumer to inquire as to credentials, and scope of practice.

### **Summary and Conclusion:**

**Until such time as**

- **the scientific efficacy of Raindrop Therapy on the progression of idiopathic Scoliosis, (or any other type of scoliosis) can be shown,**
- **and safe use of essential oils are observed,**

**Raindrop Therapy technique does not have the support as a "best practice" within a large segment of the professional community of aromatherapy practitioners. As a wise consumer, we hope you benefit from this critical viewpoint, and hope that it enhances your safe use of essential oil and practices.**

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