

Myths and Misinformation about Aromatherapy Oils

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There is no shortage of myths and misinformation about essential oils. Don't get me wrong, I love essential oils. I was a very early adopter of their use in the cosmetic products I've developed for salons, spas and retail use products. I'm fascinated by their composition, properties and great potential, but until recently I was not aware that so many have begun to ingest these oils for their so-called "therapeutic" benefits.

Scanning the Internet, I was surprised at how many were promoting the ingestion of essential oils, usually to cure a medical ailment or as a preventative of a disease or disorder. Even more worrisome was that many were being encouraged and assisted with self-diagnosis of their own medical conditions and told to treat them by ingesting essential oils. As scientist, I am concerned about the lack of proper safety information and precautions, when it comes to ingesting essential oils.

Aromatherapy oils are cosmetics and are not foods or nutritional supplements, so they are not designed or intended to be intentionally ingested. Even those who claimed to be properly trained admit the practice of ingesting essential oils can be potentially dangerous without the proper training. You wouldn't know that by reading what's posted on the Internet by those promoting essential oils as a treatment or cure for a wide range of medical conditions, ailments and disorders. Even those who are trained in the use of "therapeutic grade" essential oils will say that essential oils not labeled as therapeutic may be unsafe to ingest. They do not endorse internal therapeutic use unless recommended by a medical doctor or other health care practitioner trained at an appropriate clinical level and then only with judicious and cautious use. So, it seems many others are also expressing some type of concern about the safety of this practice.

Here are the problems and future challenges as I see them. There is no generally recognized non-manufacturer body or group that certifies essential oils as therapeutic grade. That not to say there is no such thing as therapeutic grade, clearly there is, but this is not what appears to be. Some mistake this as a regulatory quality standard. Many incorrectly assume that therapeutic grade infers that the oil is "medical grade" and/or "government approved" and neither is correct. As far as I can tell, these therapeutic standards are derived by the company selling the essential oils. That's a step in the right direction, but in order to ensure these standards are insulated sufficiently from the undo marketing and sales influence, independent standards should be developed. Also, those standards should be fact-based and rely on valid scientific methods.

As scientists, we realize essential oils are 100% chemical, but the general public is often duped by the myth that essential oils are "chemical-free". Most don't understand that a chemical is everything you can see or touch, except light and electricity. A typical essential oil commonly contains a great number different

chemical components. By some estimates, at least 3000 different unique chemical substances have been identified as components of essential oils. Even so, typical essential oils contain a few main chemical substances in high percentage that account for the fragrance, viscosity and other properties of that particular oil.

The ratios of these many different chemical components can vary widely, which means the chemical makeup of essential oils can vary greatly. The essential oils final composition depends on the type of plant, as well as, the part of the plant used, the location where it was grown, the season it was harvested, the age of the plant when harvested and the local environmental conditions, as well as how the essential oil is removed from the plant, processed and stored. To further complicate the issue, essential oils are sometimes adulterated with other lower costing essential oils that may go unnoticed unless laboratory testing is conducted. Clearly, the chemical composition of an essential oil can vary widely and depends on many various factors. This should help to explain why it is important to trace the essential oil from their source and to do laboratory testing to confirm the chemical composition.

My biggest concern is that some essential oils are known to be toxic by ingestion. Some are very irritating and are known to cause allergic reactions with prolonged and/or repeated exposures. This is one reason why essential oils need to be greatly diluted before they are applied to the skin, otherwise overexposure leading to adverse skin reactions becomes a real possibility. A common practice is to add a drop or two in a glass of drinking water each day, but even this small amount can create problems. In my opinion, too many are focused on the supposed benefits of ingesting essential oils and ignoring the potential for problems. Experts on both sides of this discussion agree that ingesting essential oils does affect the bacterial lining of the digestive tract and many are concerned that excessive exposure can lead to a range of gastrointestinal and digestive issues. For example, some essential oils have strong antibacterial properties, which could kill off large amounts of the bacteria that normally reside inside the stomach and line the intestine. Even though there are several pounds of bacteria lining these areas, ingesting these essential oils can throw off the normal balance and cause intestinal health problems.

Some dismiss this argument by claiming essential oils only kill harmful bacteria, not the beneficial ones. Really? There doesn't appear to be any scientific support for this claim. In my view it is just wishful thinking based on speculation. But even if true, that argument doesn't help their case at all, in fact it is another reason for concern. Isn't this the definition of an antibiotic? If it is true and some essential oils kill harmful bacteria in the gut, this would mean that some essential oils act like antibiotics when ingested. Therefore, long term ingestion should certainly be of concern, for that reason alone.

It is important to note that the Alliance of International Aromatherapists has this to say on the matter,

“AIA does not endorse internal therapeutic use of essential oils unless recommended by a health care practitioner trained at an appropriate clinical level.”

Besides ingestion, I'm also concerned that apply undiluted, pure essential oils to skin, which is why I recommend only using essential oils when diluted in a carrier oil or other solvent to lessen the potential for adverse skin reactions.

There are two main myths I've heard about adverse skin reactions when they occur;

1. Essential oils contain no proteins so therefore for the must not be the cause of skin allergies.

False, there are many well documented medical cases of allergic skin reactions to essential oils. Also, nickel is a common allergy causing substance and it contain no proteins. This myth is just plain wrong.

2. Rashing or burning of the skin when essential oils are applied is just your body detoxing.

False, these symptoms are typical of skin irritation and/or allergic reactions and not the result of some imaginary detoxification process.

It is important to understand that skin allergies most often are natural reactions to natural substances. These reactions are a skin protection mechanism triggered by exposure to many types of natural substances. Our skin develops allergic reactions as protection from natural substance that could injure or damage it if there were prolonged or repeated contact.

The U.S. Food and Drug Administration discusses this potential problem on its website,

"Allergic reactions have been reported with tea tree oil when taken by mouth or used on the skin. Skin reactions ranged from mild contact dermatitis (skin inflammation) to severe blistering rashes. Tea tree oil may cause bad breath, bad taste, depressed behavior, diarrhea, drowsiness, ear damage, fatigue, inflammation of the mouth, muscle tremors, nausea, skin irritation (burning, drying, eczema, fluid build-up, itching, rash, redness, scaling, warmth, and toxicity in human skin cells), slow or unsteady movements, stomach pain, uncommon blood changes, and weakness. Use cautiously in pregnant and breastfeeding women or those undergoing childbirth, due to reports that tea tree oil decreases contraction strength. Use cautiously when applied to the skin or when used as an eyelid scrub."

The vast majority of chemical substances have a both safe and unsafe level of exposure. That's also true of essential oils. Many essential oils are likely to cause adverse skin reactions when used in an undiluted form, i.e. 100% pure. Most consumers don't realize that the higher the purity of the essential oil, the "greater" the risks because the concentration of certain ingredients in the essential oils become too high for safe skin exposure. It is a common myth that pure essential are safer because they contain no toxins. Another related myth is that only pure and natural substances can remove synthetic toxins from the body.

Many are confused and use by the words like "toxin" or "natural". Toxins are poisonous substances produced by a living organism, e.g. bee sting toxin or snake venom. This demonstrates that all toxins are natural. If it's not natural, it's not a toxin. Yes, some synthetic materials may be "toxic" if overexposure occurs, but these are properly described as "synthetic toxicants". This should serve to remind us of the truth about nature. "Natural" doesn't mean automatically safe, as many believe. Nature is a dangerous place filled with many types of naturally occurring poisons or toxins or other health hazards. Nature is not the Lala-land that many imagine it to be. This misconception likely occurs because people don't have to actually live IN nature any longer and many don't visit very often either, so most tend to forget the many risks and dangers that the nature world presents.

I'm certain there are many other myths about essential oils. Since these substances are important to the cosmetic industry, formulators should familiarize themselves with both the positive benefits of essential oils, as well as to be aware of the risks and help to educate others about the many misunderstandings. They should also educate marketing professionals who promote essential oil containing products to ensure that proper safety information and usage directions are provided to consumers. When used carefully and

appropriately, essential oils can be a valuable addition to a cosmetic product, as long as they are used responsibly and safely.