WOUND HEALING WITH ESSENTIAL OILS

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The objective of this thesis is to explain and demonstrate the effectiveness of aromatherapy in wound healing with the support of a clinical case.

INTRODUCING AROMATHERAPY AND ESSENTIAL OILS

Aromatherapy is generally defined as the controlled use of essential oils to restore and enhance our physical and emotional well being. In the past century, it has evolved to become one of the major complementary therapies in many parts of the Western world (e.g. UK, France, the US, Australia etc), with evidence-based clinical applications well documented in hospices, clinics and hospitals that uphold natural holistic therapies.

The “magic” of the therapy lies mainly in essential oils, which, like herbs, are derived purely from plants (flowers, leaves, barks, roots, fruits etc) and represent the life force of plants.

These highly concentrated phyto-chemicals consist of extremely small molecules that are fragrant as well as highly volatile; and exhibit medicinal or therapeutic properties such as anti-microbial, anti-inflammatory, analgesic, sedative, antispasmodic etc. With the right dosage, proper blending and applications (such as inhalation, massage, bath, compress, mouth washes and gargles etc), essential oils can enter our brain and bloodstream to trigger a series of self healing and balancing actions.

Documented research and experience over the years in the field shows that aromatherapy is particularly helpful to conditions such as stress and anxiety, sleeping problems, skin diseases, wounds, bruises, infections, inflammations, muscular aches and tension etc.

Our focus this time will be on the benefits of essential oils on skin, and in particular, on wounds.

WHY ARE ESSENTIAL OILS GOOD AND EFFECTIVE SKIN HEALING AGENTS?

The most important reason is that essential oils are highly penetrating, given their extremely small molecular size and lipophilic property. They readily go through the skin to reach the deeper layer of the dermis, before eventually venturing into the bloodstream. They are therefore able to bring to the skin the very much required defence and healing mechanism such as the killing of germs; anti-inflammatory, cicatrizing, anti-allergic, anti-oxidant, hydrating and anti-itch effects; and the ability to stimulate the micro-circulation in the skin.

And that’s why essential oils are not only good for daily skin care, but also helpful in the treatment of skin disorder such as eczema, psoriasis, allergies, acne, scars, wounds, sun burn, insect bites, fungal and bacterial infections etc.
CASE STUDY: WOUND HEALING WITH ESSENTIAL OILS

Background:

My client Samuel is a young guy about 18 years of age. During his holiday with his family in Singapore in April 9 2012, he got injured while riding on a Segway (which is like a vertical motor bike, see picture 1). More than a foot-long (approx 12 inches × 2.5 inches) of skin was grazed on the right side of his right lower leg. Judging from just the surface, the wound was not very deep, and there was minimal bleeding. However the soft tissue and tendon underneath the wound and around the ankle was severely damaged, as he later had to be on crutches in order to move around.

Samuel sought help immediately from a GP after the accident and was given antibiotics for two to three weeks as infection was very possible due to the size of the wound. He was also given some “Inadine” dressing (iodine patches) to cover the wound to help with disinfection.

After more than 10 days after the accident, I was given a photo of his wound (see picture 2) and was requested to offer some oils to help promote healing and minimise pain. As could be seen in the picture, certain parts of the wound were still wet and “open” although scabs had already started to form around the edge. As Samuel himself described it, it was quite “inflamed and unsettled” although more than a week has passed.

![Picture 1](image1.jpg) ![Picture 2](image2.jpg)

Formulation of the Wound Healing Oil

Given this background, I prepared a blend with the following goals and formulation for Samuel, which reached him on April 21 2012, i.e. 12 days after his accident. I instructed him to apply the oil at least two times a day after cleaning, and cover it with a non-stick wound pad for protection purpose afterwards.
Goals

1. Anti-inflammatory and cooling
2. Analgesic and soothing
3. Cell regeneration
4. Anti-infectious and anti-microbial (I didn’t know Samuel was taking anti-biotics, but even I did, given the size of the wound, I would still make this one of the goals as bacterial infection is one of the challenges of any wound.)

Essential oils at 2% concentration

- Matricaria chamomilla (German chamomile) 35%
- Lavandula latifolia (Spike Lavender) 40%
- Helichrysum italicum (Immortelle) 25%

Base oils

- Rosa rubiginosa (Rosehip seed) 50%
- Simmondsia chinensis (Jojoba) 50%

Rationale

About concentration: essential oil concentration in a vegetable oil medium can be as high as 5% - 10% for topical and localised application; but in this case, I used only 2%. This is in consideration of the fact that part of the wound is still wet and “open”. Too high a concentration might be over stimulating. Also, this is the first time that Samuel tried aromatherapy, and we were not sure if he is allergic to any particular oils. Besides, I expected him to apply at least two times per day for a considerable period, say at least two weeks, and so a lower concentration would be sufficient in terms of strength.

German Chamomile: With the significant presence of the blue colour constituent “chamazulene”, and alpha-bisabolol, German chamomile is a highly anti-allergic and anti-inflammatory agent. To many, it is very soothing, and is revered by some as an “instant pain killer”, probably because of its very cooling and anti-inflammatory actions. It is excellent for any inflamed conditions, such as burns, allergic rashes, wounds, ulcers etc, and thus appropriate in this case.

Spike Lavender: Spike lavender is used here instead of True Lavender because of the “anti-infectious” goal in mind. We have to have something antiseptic and anti-microbial but still skin friendly. Spike lavender is perfect for this because it contains mainly cineole and camphor (40-60%), while the rest are linalool, linalyl acetate etc which give skin-friendly, calming, analgesic, and cicatrisant properties similar to True lavender. I did not use very strong anti-microbial oils like Tea tree in Samuel’s case because the wound was already over a week, and there was no sign of pus and infection so far.

Immortelle: The anti-inflammatory, analgesic, anti-allergic and cell regenerating properties of Immortelle is so strong and unique that it is always among the top choices for skin conditions that involves wounds, tissue damage or trauma! Its high content of sesquiterpene hydrocarbons plus
esters contributes to the calming and anti-inflammatory properties, while the presence of ketones gives the cell regenerating effects. Immortelle is often used for burns, scars, ulcers, open wounds, bruises, and even in anti-aging, and so it was included in the blend for Samuel.

**Rosehip seed oil:** Containing mostly essential fatty acids including alpha-linolenic acid and linoleic acid which are very much required by our body, especially for the building up of cell membrane, Rosehip seed oil is anti-oxidant, cell regenerating and can help with the mini-circulation and water balance of our skin. It is excellent for dry, cracked skin, slow healing wounds, scars, ulcer, eczema etc. and therefore very appropriate in this case.

**Jojoba oil:** As the constituents of Jojoba oil are very similar to certain compounds found in our natural skin sebum, it is a good complement to other oils to make the overall blend very close to our own skin oil. Besides, it offers great moisturising effect, and has a long shelf life because of the presence of myristic acid, a natural preservative.

**Results**

On April 24, i.e. three days after Samuel first applied the oil on his wound, I received a mail from Samuel’s dad who thanked me for the wonderful effect of the oil:

“Many thanks Dawn for your miracle oil! Samuel was telling me how effective it was to his wound. He is not feeling so painful after applying generously on his leg…”

His dad also asked me to prepare more oil for Samuel’s continued use. And just to be safe, apart from giving him the original blend, I prepared one more bottle of oil in which the same formula of oil was added with *Calophyllum (Calophyllum inophyllum)* and *Tea tree*. The intention was to use Calophyllum for its phagocytosis-stimulating quality, i.e. its ability to stimulate our immune system to kill germs and remove unwanted substances from the skin. Tea tree is on the other hand a well known anti-bacterial, anti-viral and anti-fungal oil. I was afraid that, due to the big size of the wound, infection could happen any time, and there might even be pus building up during the long healing process…. and yet my original blend might not be strong enough for this purpose.

So I asked Samuel to keep this as a “stand-by”.

What I understand later was that the healing was very smooth and miraculously fast. According to Samuel, he found the oil very soothing the first instant he put it on (in Samuel’s words, “the smell of the ointment was very pleasant and has a somewhat soothing effect to it”). And just after a few days of use, the wound had settled down with more scabs formed. By the time the second batch of oils arrived, which was a week after the first batch, Samuel was already walking around without the crutches. Also, the scabs of the wound had started to come off by itself by then. And surprisingly, “there was little itch when the scab was coming off. It came off naturally during the day and in the shower……
On May 5, i.e. 15 days after Samuel first applied the oil on his wound, he sent me another email to say thanks: “Many thanks again for your magic potions, I've attached a photo of my newly healed wound. I am so very blessed to have such a speedy recovery!” (See picture 3)

I asked Samuel to comment on the healing process as well as the contribution of the oil, and he said in two different emails the following: “Thanks to the ointment (i.e. the oils I gave him), and of course with sufficient rest and careful treatment to the wound, the healing process only took a little more than 2 weeks. Soon I was able to walk again…..”

“I think the ointment helps promote healing and helps the wound to ‘settle down’, it definitely speeded up the healing process. But with good dressing, enough rest and application of the ointment to the wound about twice or three times a day the healing process was surprisingly quick! I wound certainly recommend the ointment to my friends…..”

By “careful treatment”, Samuel means the use of adequate dressing (the Inadine dressing given by his doctor) to protect the wound. During the period, he has also used a moisturising cream called E45 that works like Vaseline but is less greasy. I think the anti-biotics helps a lot too in combating bacterial and preventing infections, although this is not what people in the natural healing realm would recommend.

Conclusion and Reflection

I would say the formula of the blend for Samuel was effective. Almost all of our goals set in the beginning were achieved. 1) The wound has “settled down” quickly from its highly inflamed condition. 2) Samuel found the oil very soothing, and his pain gone in a few days after application. 3) And most importantly, the healing and cell regeneration took place smoothly and quickly, with the scabs formed and fell off naturally without creating a lot of discomfort or itch for him.
The use of antibiotics was of course also significant in the process, but I think this won’t minimise the contribution of the oils. As evident from the wound’s condition (which remained wet, inflamed and painful) even after more than a week since the accident, anti-biotics did not really work much on this level. What suddenly sped up the healing process was the oils, and this is something beyond what antibiotics can do. Besides, it is not impossible that the oils had also exerted its anti-microbial and dis-infecting actions on the wound even under the influence of antibiotics, though it is not a case that we can prove.

One other factor that is however worthy of mention is that of AGE. As a healthy young guy, Samuel is full of life and energy, and so it is not surprising that his rate of recovery is much faster than normal adults. And so we should not expect the same result when we apply the same oil on another client who is in a different stage of life and with a different health or medical background.

But after all, the client knows his own body well, and how he felt about the oil is the most important. I think Samuel has given a very good conclusion for his own case. Everything he did (taking antibiotics, careful treatment with dressing, using the oils and even the moisturiser) contributed to the speedy recovery. But it was the oil that really soothed his pain, reduced the inflammation and triggered cell regeneration, and I think it is for these very important points that we should give credit to the essential oils and base oils involved.

REFERENCES


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