



*A Natural Way Of Being*

# ACNE AND SEABUCKTHORN

# INTRODUCTION

Acne is a growing problem and Seabuckthorn is an important and proven treatment. Researchers are beginning to recognize the significance of inflammation and hormonal imbalance in the ‘eruption’ of acne, particularly adult acne, and seabuckthorn, with its rich fatty acids, inflammation fighting phytochemicals, and skin softeners, is at the forefront of treatment.

The following document is intended to be a guide to the causes of and treatments for acne. Part I outlines some of the specific qualities of Seabuckthorn that positively impact acne. Part two is a detailed description of acne, a summary of the symptoms and suspected causes, Part III is a FAQ (Frequently Asked Questions) section, and Part IV is a point form ‘Quick Facts’ sheet.

## I – SEABUCKTHORN AND ACNE

Seabuckthorn is such a complex and synergistic product that it can be a challenge to try to explain *what specifically* about seabuckthorn conquers a particular issue or disease.

When approaching the problem of acne, it is helpful to focus on the following qualities of Seabuckthorn (explained in detail later) that directly impact acne: *Anti-Inflammatory* (reducing swelling, flushing, irritation and cell damage); *Auto-Immune Moderator* (discouraging over-zealous immune system responses that attack healthy tissue); *Heart and Vascular Healer* (strengthening blood vessels, cell walls and circulation); *Anti-Microbial* (making the skin and body an unwelcome place for bacteria, microbes and parasites); *Hormone Regulator* (with topical and internal use, soothing overactive hormone production and regulating the endocrine system); and *Skin Conditioner* (nourishing and retaining young, healthy cells while softening scar tissue and tough, fibrous or abnormal ones). In particular, the predisposition of topically-applied and ingested Seabuckthorn oils to regulate the endocrine system (hormones) is of particular interest, since most if not all acne has a major hormonal component.

Seabuckthorn:

- Regulates hormones, as well as normalizing sebaceous secretions, blood chemistry, endocrine balance and other systems that can be affected by hormone imbalances;
- Is an anti-inflammatory, nerve and vascular conditioner, and an anti-irritant;
- Is an anti-microbial (bacteria, yeast, fungus, other microbes);
- Performs many of the same functions as prescribed steroids, but without the same side-effects;

- Conditions the skin in many ways; it helps acne by healing micro-tears in the skin, thinning out thick, coarse areas and constricting pores, as well as softening and healing scars beyond what is possible with any other non-surgical treatment;
- Quercetin, an ingredient in Seabuckthorn berries, is an antihistamine. The damaging effects of inflammation are recognized as part of the cycle of acne;
- Seabuckthorn's anti-aging properties may slow down cell death, resulting in less skin thickening and shedding that contributes to eruptions;
- Many skin care products can exacerbate acne, either due to over-drying, chemical reactions, allergies or sensitivities. Unlike many other skin care products Seabuckthorn soaps, creams and oils are simple and natural, decreasing the likelihood of negative reactions;
- Seabuckthorn tea contains natural salicyns; green tea and aspirin (acetosal) topically applied and ingested, is an emerging treatment for acne. The salicyns are natural anti-inflammatories and anti-keratolytics, soothing inflammation and breaking down thickened tissues.

## II – ABOUT ACNE

### *Description*

Acne is an inflammatory condition of the skin, arising primarily in and around the pilosebaceous units (the hair follicle and its sebaceous gland). While acne has been historically associated with puberty, adult acne has become more and more common.

Acne occurs as:

- Blackheads (plugs of sebaceous secretions (skin fats, which may be liquid like oil or more waxy) which appear black due to oxidation);
- Whiteheads (like blackheads but sealed with skin cells, giving the appearance of a white plug);
- Pustules (tiny infections in a pore which appear red, swollen and contain pus and other fluid);
- Cysts (deep infections which occur as painful, sometimes red bumps but resist the extraction of their contents).

Acne typically appears on the 'T-Zone', forehead, nose and chin, but can occur elsewhere on the face, the scalp, neck, shoulders and chest.

The skin secretes oils in order to cleanse the pores and condition the skin. As the skin sheds dead skin cells, the pores can become plugged, and when the dead cells mix with the oil trapped in the pores, acne occurs. Blackheads and whiteheads are the result of a mixture of sebaceous

secretions, dead skin cells, and other impurities. Pustules and cysts result when the walls of the pore are damaged, either by the collection of impurities in the pore or manually (during blackhead extraction or overly-vigorous cleansing for instance) and bacteria present in the pore infects the surrounding tissue.

One of the most persistent and significant elements of acne is the scarring that can result; even without excessive picking or extraction, acne can cause noticeable, emotionally debilitating and permanent scars. ***The following elements of seabuckthorn can ameliorate this problem: Seabuckthorn contains numerous antihistamines like Quercetin that reduce inflammation, resulting in smaller eruptions and therefore smaller scars; seabuckthorn contains phytochemicals such as salicyns that soften scar tissue and thin and smooth thickened skin.***

## **Causes**

The simple cause of acne is hormones, specifically *androgens*, the range of male hormones that become more prominent during puberty for both men and women. Adult acne is also thought to be hormonal, although adult acne is more associated with the nonsexual range of the endocrine system, including insulin, adrenalin, growth hormones, etc.

Acne can be caused or irritated by other factors such as drugs, cosmetics, sun exposure, diet and overall health. The significant increase in sufferers of adult acne is somewhat perplexing, and possible causes include hormones, environmental pollutants, and stress.

## **Hormones**

During puberty, the main acne culprit is testosterone, which stimulates oil production, thickens the skin, and increases the quantity and dimension of body hair. Changing hormones can also alter body chemistry, depressing or hyper-stimulating the immune system, allowing bacterial colonies to flourish, and increasing sensitivity to external factors such as drugs and cosmetics.

While adult acne is not specifically testosterone-driven, it is believed to be related to hormonal fluctuations, both pharmaceutically-induced (due to consumption of birth control pills, anabolic steroids, and drugs that stimulate hormonal response), and ‘naturally’ occurring. Non-pharmaceutical causes of hormonal fluctuations include kidney problems (adrenal hormones), insulin resistance and adult-onset diabetes (insulin), ovarian changes (sex hormones), pregnancy, weight gain (which affects hormone production across the board), liver damage (overall hormone and lipid regulation), and problems with any of the hormone-producing glands such as the thyroid, pituitary, hypothalamus, and even the skin. Hormones consumed in food can also have an effect.

*Why we are suffering more from hormone fluctuations than in the past is a significant question, and the research is only now being done to determine the answers. Aside from the external factors listed above, possible causes include excess weight, which affects the whole endocrine system including sex hormones; stress; hormones consumed through meat, milk, and even water (growth hormones that persist in food, runoff from factory farms, and environmental pollutants that mimic hormones); organ damage (most of our organs work to regulate our endocrine system in some way); consumption of ‘bad’ fats such as saturated and trans fats (see ‘diet’); environmental pollutants which can tax our endocrine system; and a deficient diet which may suppress or over-excite the endocrine system. ***Seabuckthorn is a known hormone regulator.****

## **Diet**

Much has been said over the years about the effect of diet on acne. While admonishments for acne sufferers to avoid chocolate, french fries and junk food have mostly been discredited, the

general idea bears closer inquiry. Of course certain foods may be triggers for individuals; avoiding irritants is a very personal job for acne sufferers.

**Overall diet** – the effect of diet upon the endocrine system is becoming more and more clear, and diets that are vitamin-deficient, high in chemicals, low in fiber, or promote imbalance of fatty acids are coming under scrutiny for the part they play in skin health.

**Sugar** – it is a fact that cultures that avoid excessive consumption of low-glycemic index carbohydrates (primarily refined sugars) suffer very little adult acne. It is suspected but not proven that sugar's effect on the endocrine system (particularly, but not exclusively, insulin production) is the culprit. It is also useful to consider the way sugar consumption can affect microbe blooms (bacteria and fungus), suppress the immune system, and displace nutrient-rich foods.

**Fats** – it seems logical that, since acne is associated with greasy skin, fat consumption should affect it. While true in part, it is not that simple. A diet low in fat *will* result in less-greasy skin, but it's important to note that sebaceous secretions alone *do not cause acne*. Oil + dead skin + bacteria + contaminants + the right environment causes acne. It is known that fat consumption, particularly animal fat, affects hormone production. It is also being considered that the consumption of saturated fat causes surface oils to be more viscous, which can contribute to plugs. Furthermore, the consumption of unfriendly fats (those that lower HDLs (High Density Lipoproteins) or raise LDLs (Low Density Lipoproteins)) is unhealthy for skin, while 'good' fats (those that do the opposite) contribute to skin health. The omega fatty acids are particularly good for acne. *Seabuckthorn oils are an excellent source of Omega fatty acids.*

**Fiber** – the consumption of sufficient soluble and insoluble fiber is known to regulate insulin production, which contributes to a healthy endocrine system. Furthermore, the consumption of sufficient fiber helps to maintain a healthy microbial environment in the digestive system; the overgrowth of unhealthy microbes (which produce toxins that are absorbed by the body and must be cleared somehow), are believed to cause or exacerbate acne. Unhealthy microbial blooms can also interfere with the absorption of nutrients.

**Chemicals and pollutants** – the effects of our chemical world on our bodies is misunderstood, but it is known that many of the chemicals we consume can depress our immune system, cause allergic reactions, and tax the organs that are tasked with processing and eliminating them. It's important to remember that the skin is our largest eliminatory organ; a lot of what needs to be excreted by our bodies comes out through our pores, and can irritate and tire the skin.

### **Drugs, cosmetics and chemicals**

In addition to ingested chemicals, many pharmaceuticals, cosmetics and other chemicals can cause or irritate acne, usually through allergic reactions or simple side-effects. Up to 50% of people are allergic to something they put on their skin. There is no way of knowing who will be allergic to what; expensive preparations are no defense against negative reactions. It is important to note that care must be taken with cosmetics and other preparations that dry the skin; dry skin = micro-tears, which contribute to aging and provide an entry point for bacteria. Frequent, gentle cleansing may be a better solution than trying to dry the skin out.

### **Immune system**

Even a slightly-suppressed (or over-active) immune system can significantly affect the skin. An underactive immune system can result in an overabundance of microbes that contribute to pustules and cystic acne, and an overactive immune system can cause fluid retention and inflammation that can exacerbate eruptions and slow down healing.

*Seabuckthorn is an immunity booster and an auto-immune conditioner (it ameliorates auto-immune reactions).*

### **Inflammation**

The role of **immune cells** and **inflammatory mediators** (histamines, prostaglandins and others) in the progression of acne and other skin conditions has been proven: they leak from the microvascular bed, causing or exacerbating eruptions, slowing down healing, and starting a cycle of irritation=>swelling=>picking=>spreading. *Seabuckthorn is known to moderate histamines and prostaglandins.*

The importance of this element cannot be underestimated. It is important to note that one of the emerging treatments for acne is *ice*. Why? It reduces inflammation. This is news in part because of the historic preoccupation with oils in relation to acne. It is now being understood that inflammation is one of the main contributors to acne. Oil + dead skin are just blackheads or whiteheads. Bacteria live on our skin all the time, but does not always result in acne. The presence of histamines, which swell the tissue causing ruptures, which invite the introduction of bacteria, which invites an immune response and more histamines, is the vicious cycle to be broken. *Quercetin (a bio-active ingredient in seabuckthorn berries) is the best anti-inflammatory in nature.*

### **Skin thickeners**

In addition to factors that stimulate oil production and unbalance the immune system, the thickening of the skin is a factor in acne, because it results in more dead skin cells in pores,

farther for the oil to travel to get to the surface of the skin, and an increased likelihood of micro-tears which invite bacterial invasion and stimulate an immune and histamine reaction. Hormones, sun exposure, overly-enthusiastic cleansing regimens, drugs, cosmetics, and some diseases and syndromes can cause the skin to thicken.

***Seabuckthorn is unique in that it significantly strengthens the walls of individual cells and capillaries, while thinning and softening the tissue of the skin.***

## **Treatments**

Treatments for acne fall into the following categories:

**Exfoliation** – either manually (by hand) or using an exfoliation agent such as salicylic acid (***SBT Seabuckthorn Tea is rich in natural salicylic acid***), which decreases the buildup of dead skin cells and thins the skin surface. Overly-vigorous manual exfoliation can actually exacerbate acne by irritating the skin and causing micro-tears.

**Topical Bactericidals** – such as benzoyl peroxide that kill bacteria. These preparations can dry and irritate the skin.

**Topical antibiotics** – kill bacteria on the surface of the skin.

**Oral antibiotics** – see above. It is important to note (v/v antibiotics) that successful treatment of Rosacea with antibiotics has now been attributed to the drugs' anti-inflammatory actions, rather than their anti-bacterial actions. Also note that drug-resistant strains of bacteria are emerging.

**Hormonal treatments** – the oral consumption of female hormones can ameliorate acne in women, and steroids are sometimes applied topically.

**External retinoids** – such as Retin-A, act on acne by thinning the skin and reducing cell death. ***Seabuckthorn does exactly the same thing, without the sometimes serious, sometimes permanent side-effects.***

**Oral retinoids** – see above.

**Phototherapy** – kills bacteria on the surface of the skin.

### **III – FAQ&A**

#### **What about oil? Wouldn't the ingestion or topical application make it worse?**

This is a fallacy. First, when skin is too dry, it a) suffers from microscopic cracks and tears due to dryness, which provides a breeding ground for bacteria and leads to more eruptions; and b) causes pores to secrete more oil to compensate. Second, oily skin is not a problem per se, it is oil that gets mixed with dead skin, bacteria, dead microbes, dirt, make-up etc. deep in the pores that is a problem. Third, SBT Seabuckthorn Seed Oil applied to the surface of the skin can actually draw oil up from deep in the pores, balancing it. Fourth, SBT Single Source Capsules is very healthy for consumption.

#### **I thought soap isn't good for your skin?**

SBT Seabuckthorn Therapeutic Tea Bar gently removes dirt, oils and impurities from skin and rinses away clean, without leaving either greasy or soapy residues like many soaps and liquid cleansers.

#### **A lot of this is new to me. How come no-one thought of this stuff before?**

It is new. It's new to scientists too, but it is proven and gaining recognition. Particularly the importance of inflammation and inflammatory mediators, the subtle but cumulative effect of hormonal imbalances, the effects of immune system imbalances, and the importance of thin but strong skin.

### **IV – QUICK ACNE FACTS**

- Adult acne is significantly on the increase, particularly in Western cultures.
- Acne and Rosacea are often mistaken for each other.
- Acne is not caused by sexual activity (or lack thereof), greasy food, or poor hygiene.
- Inflammation is a significant contributor to acne eruptions; inflammation increases the scope of eruptions and the time required for healing;
- Hormonal irregularities are a significant contributor to acne; they stimulate oil production, and affect immune system response and microbial blooms.
- Certain foods may cause acne in certain people; excessive sugar and 'bad' fats are suspects.
- 50% or more of people are allergic to at least one thing they put on their skin.