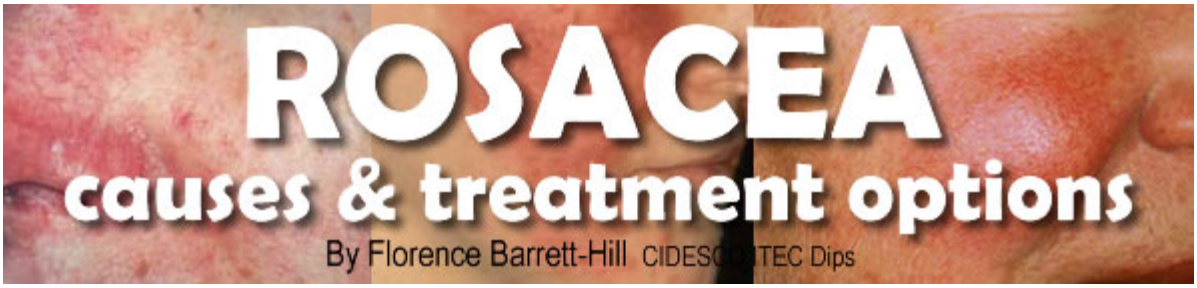


Rosacea is perhaps one of the most widely seen skin conditions, but the least understood. Adding to the confusion is a plethora of treatments that claim to stop or reverse the effects of Rosacea.
The aggravating factors of Rosacea vary in each individual, so it is logical that to effectively treat the individual condition, the cause must be determined first to better choose the appropriate treatment modality.

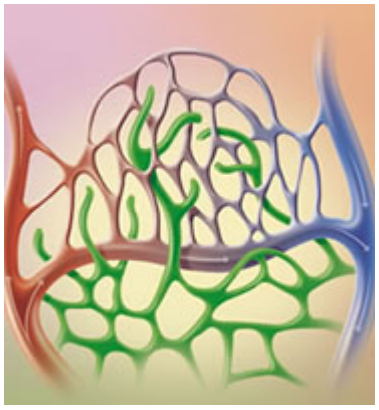
What is Rosacea?

Rosacea is a disorder of the vascular system of the facial area. Acne has no relationship to Rosacea other than the similarity in appearance of some of the lesions on the skin surface and associated inflammation. A major indicator of the difference is the lack of comedones.
In Rosacea sufferers, the affected facial blood vessels are experiencing changes in normal function. These blood vessels become hyper-responsive to various internal and external stimuli, with distinct functional changes in their behaviour occurring. These changes include dilation to substances and hormones that have no effect on blood vessels elsewhere in the body, with this dilation occurring for abnormally long periods of time.
Often associated with the inflammation and dilated vessels is a loss of structural integrity of the connective tissue that forms the support structure for the mat of vessels.

This leaves the vessels both physically weaker and closer to the skins surface and therefore more visible. It is because these capillaries are much denser in the facial area than the anywhere else in the body that it appears to be isolated to that one area.

This functional hyper-responsiveness and subsequent structural changes result in more blood flow through the facial skin and causing further inflammation and damage, thus making the condition worse.

The result is a chronic and progressive disorder; with each vascular change resulting in further inflammatory response.

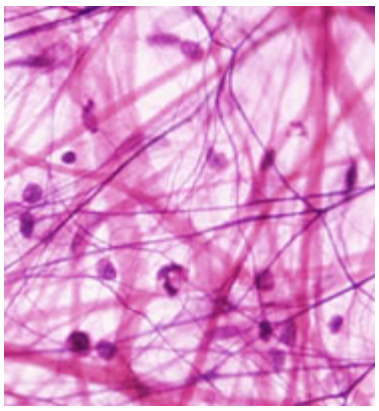


In Rosacea sufferes, the mat of capillaries become hyper responsive to stimuli

Causes

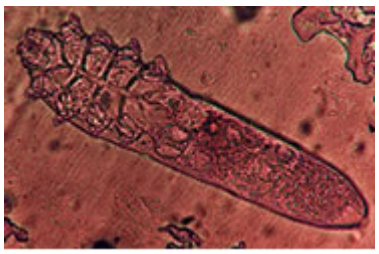
We know that vascular disorders can be congenital (intrinsic) or developed, (extrinsic) but in the case of Rosacea, there will always be a trigger cause, but will be built on a predisposition.
Typical causes are physical, emotional stress, chemical, medication, digestive disorders, hormonal, UVR exposure Vit C oxidisation, hypoxia (oxygenation loss) free radicals, Vit A deficiency and diet. These elements, alone or combined can lead to the development of vascular conditions and loss of structural integrity. They will be more apparent as Rosacea in skins that have a predisposition to permanent diffused redness.

In the cases of developed (extrinsic) Rosacea, it is common to find the barrier defence systems of the skin have been compromised, along with poor cell nutrition due to essential fatty acid deficiency (EFDA) and an impaired acid mantle. This combination of factors makes the skin susceptible to outside influences and results in a weak and thin connective tissue layer that provides little support to the capillary network. It is understood that most skin conditions that has the appearance of permanent diffused redness will suffer from this weak and thin connective tissue.



Weak & loose connective tissue surrounding the capillary mat is one of the factors to be addressed

Another aggravating factor can be the presence of tiny mites known as Demodex folliculorum that burrow into the skin's hair follicles and cause the reaction. The fact that topical metronidazole (a type of antibiotic) has been used with considerable success, supports the theory that this may be an important part of the Rosacea problem.



The Demodex folliculorum mite is another aggravating factor

Because the dilation of these micro vessels causes an inflammatory response, the medical profession elect to use oral and topical antibiotics as the answer to Rosacea, often without a satisfactory result.

In addition, angiogenesis, (the overgrowth of capillaries) will also be a result of capillary damage and the restriction of oxygen and nourishment flow to the cell producing layers.

Treatment options

Because of the wide variety of individual or combined aggravating factors, there will be modalities of treatment that will have more effect than others dependant on these factors and length of time the individual has suffered.
So what are the various treatments attempting to achieve? Lets look at how each treatment works on the condition.

Topically applied formulations:
The principle of these traditional treatments is to deal with both the inflammation and the fragile connective tissue by simultaneously reducing the inflammation and helping to rebuild the connective tissue surrounding the vessel mat.
Good quality formulations will contain therapeutic ingredients, vitamins, anti-oxidants, and anti-inflammatory agents, all helping to maintain the integrity of the blood vessels in the area while supporting and encouraging the collagen network of the skin to strengthen and rebuild it.
This method of treatment is best suited to individuals with milder cases caused by reaction to topical substances. (When use of the aggravating substance has been discontinued!)
In this scenario the rebuilding of the acid mantle and strengthening of the epidermis must also be addressed, and this may require further measures dependant on response.

Peeling:
While the concept of peeling may appear to be quite aggressive for this type of condition, the results have been reported to be quite favourable.
The principle behind the peeling modality is to sterilise the skin surface and stimulate a mild inflammatory response to trigger the regeneration of the connective tissue. The sterilisation of the skin surface is of particular importance in this modality, as it will remove all traces of the Demodex folliculorum mite if present.

Typical peeling agents are Alpha Hydroxy acids, (Ph of 3.5 - 4.5) or a TCA. (2% - 5%) Lactic acid is also used. In most cases, the skin is first prepared with Vitamins A & C to help strengthen the capillaries and connective tissue.

Peeling has been shown to be an appropriate solution in some cases

This type of treatment is ideal for intrinsic types and should only be undertaken by therapists who are experienced users of acids, as there will be a degree of careful observation of the reaction required to ensure the acids are applied for the appropriate time.
With peeling, there will always be a degree of client discomfort, so clients who are not willing to undergo a little “pain for gain” should be offered alternative modalities.

There are also a number of prescribed consumer Rosacea treatment products that subscribe to the sterilisation/peeling method, with products such as Finacea™ (an azelaic acid gel, 15%) available from dermatologists.

A quick word on Microdermabrasion
Although some technicians and aestheticians employ Microdermadrasion to treat rosacea, I personally would not. While it ultimately attempts to achieve the same goal as peeling, the physical aggression does not justify the quality of result over a period of time.

Laser & Intense Pulsed Light:
The principle of laser and light therapy is two fold: (1) that of selective photothermolysis that denatures the dilated vessels, and (2) the introduction of a controlled inflammatory response to stimulate fibroblast activity to build the fragile connective tissues.

The photothermolysis is similar to the treatment of red veins by thermolysis, and works by light energy with high absorption by haemoglobin and oxyhemaglobin reaching the dermal capillary bed and selectively denaturing the abnormal vessels.
This type of treatment is usually performed with a Pulse Dye Laser or an Intense Pulsed Light source with an output in the 500nm to 1200nm range.

Intense Pulsed Light treatments can have satisfactory results when undertaken correctly

For best results with this modality, it would make sense to first rehabilitate the fragile connective tissue, providing a better foundation for the photothermolysis that will follow. If the connective tissue has been sufficiently improved before the photothermolysis stage, then the results are usually good.

Unfortunately, there are reports of adverse reactions to this modality, however they are usually confined to individuals with very low Fitzpatrick skin types (Type 1) who have a history of sun exposure and carry the redhead gene. (MC1 receptor)
In these cases the fragile connective tissue in the effected areas has reacted badly in the form of purpura, swelling, and blistering, and this may be due to the IPL and laser technicians dealing directly with the photothermolysis aspect of the treatment without the preparatory work first.

Summary
Rosacea is a condition that can respond to appropriate treatment over a period of time.
There are no quick cures, and a good result will only be achieved over a months of treatment.
In all cases, treatment is a multi-stage process, and will require a review of progress before the next stage is undertaken.
It must be remembered that in almost all cases of Rosacea, the connective tissue in the effected area is fragile, so steps must be taken to keep the tissue in good health to prevent re-occurrence.
Consequently, there may be changes in lifestyle and diet required to keep the condition in permanent check.