

# Can the Cream Replace the Lasers for the Acne Scars?

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## Abstract

The most common dermatological disease is acne, due to genetic factors, lifestyle and the food. In the most cases, acne resolve but the acne scars are permanent. In some individual, the acne scars significantly affect the quality of the life and cause the psychological problem like loss of the self-confidence. The lasers and other technologies are very effective to remove acne scars. We want to represent the first cream to reduce and smooth acne scars. It's based on butyl resorcinol which also speeds up the acne resolution at the same time. The cream is applied 1 or 2 times daily on the scars. The results are seen mostly in the first few weeks. The cream is only for the use of the acne scars.

**Keywords:** Acne scars; Acne vulgaris; Butyl resorcinol; Lasers

## Introduction

Due to the Western lifestyle and diet, acne vulgaris represents one of the most common dermatological diseases. It is not only an aesthetic problem but also psychological one, because even when the inflammatory nature of acne resolves, the acne scars remain present, which may significantly affect the quality of life. There are many different modalities to treat acne scars, of which the lasers play a significant role. Unfortunately, these treatments are expensive and not many individuals can afford it. Here we would like to present the cream "Scarless", based on butyl resorcinol, which is one the best laser alternatives for the removal of acne scars. The cream "Scarless" is also very useful for the active acne because at the same time it reduces inflammatory redness and removes the scars. It can be used for the acne scars on the face, chest, and back, but the scars on the face generally respond better.

Acne vulgaris is one of the most common dermatological diseases. It is a chronic inflammatory disease of sebaceous glands of multifactorial etiology such as hormones, genetics, food, stress, etc. The food plays very important role for the acne development, especially sugar, milk and milk products. Almost every individual experiences some degree of acne during their life. Because of the involvement of the face, acne is a major cosmetic and psychological problem for many teenagers and young adults. For this reason, acne should be always taken seriously. After the inflammation subsides, very often the scars remain. The acne scars is a very common esthetic problem and often significantly affects the quality of the life causing stress, depression, and loss of self-confidence. In order to prevent the acne scars, it is crucial to begin with the treatment early. Today it is not necessary for the acne scars to develop, especially taking into consideration numerous effective treatments. Mechanical and deep cleaning of the face still has an important role because it cleans up the skin pores and prevents the development of microcomedones. The mode for the microcomedone to develop is the closure of the skin pores due to the abnormal keratinization: follicular proliferation and retention hyperkeratosis. As a result, the flow of sebum is blocked, and the microcomedone starts to develop. Finally, the follicular wall disrupts because it can no longer distend due to follicular obstruction. The comedo discharge enters the dermis and produces inflammation. The inflammatory cells and P. Acne further promote the inflammation. The development of the scar depends on the extent of the inflammation. Some individuals overreact to the inflammation and have an increased risk for the scar to develop. There are several factors which determine the extent of the inflammation, especially the immunological response and the amount of the discharge to the dermis.

The acne scars can be classified as:

- Ice pick
- Deep rolling
- Boxscar
- Hypertrophic and keloids

## The Study

The study was conducted on 60 male and female volunteers, aged between 18 and 34. The cream was used for all acne scar types except for keloids and hypertrophic scars. Half of the volunteers were treated for the scars on the back and other half was treated for the scars on the face. Several of them had active acne. The only treatment modality for scar removal was “Scarless” cream, applied 1× daily. The group with the face involvement used the cream for 30 days, while the group where the back was involved used the cream for 45 days. The photo of the scars was taken before and after recommended period of time (Figures 1 and 2). None of the volunteers reported any serious side effects of the cream, except very short and mild burning during the first few days. Aside for reducing the scars, most volunteers reported that the skin texture was significantly improved, inflammatory redness reduced, and also reduction of acne and skin pores. In the group with the scars on the face, 60% of the volunteers were very happy with results, 30% of them were moderately happy, while 10% of the volunteers did not notice any significant improvement (Figure 1). In the group with the scars on the back, 40% of the volunteers were very happy with the results, while 55% were happy, and 5% did not notice any significant improvement (Figure 2).

The main ingredient of the cream is butyl resorcinol, which has a strong anti inflammatory effect, which explains significant reduction of postinflammatory redness in the most of the volunteers. It also has a peeling effect, increases synthesis of the glutathione reductase, and promotes new collagen development. The cream showed strong acne reduction effect with the reduction of the skin pores. The skin texture and the quality were also improved. The cream is effective for the most of the acne scars types except for the ice pick scars which are the most difficult ones to remove.



Figure 1: Acne scars on the face



Figure 2: Acne scars on the back

## Discussion and Conclusions

There are many different treatments for the reduction of the acne scars. The abrasion and peeling were one of the first treatments [1]. Ablative lasers such as CO<sub>2</sub> and erbium were also used with great results but with significant downtime [2]. The subincision represents the release of the connective tissue which pulls down the skin by the needle. The punch biopsy can be used especially for the ice pick scars. One of the most important treatments was the invention of the fractional lasers which produce microscopic damage under the skin to replace the damaged tissue. The fractional lasers can be divided according to the effect on the skin to ablative lasers which damage the skin, and nonablative lasers which do not damage the skin. Today, the fractional lasers present the most important and the most effective treatment for the acne scar removal. The fractional radio-frequency works on the same principle as the fractional lasers, but instead of the optic energy uses radiofrequency. The plasma can also be used to treat the acne scars [3-7]. Recently, stem cells and growth factors started to be very promising therapy for the acne scars. The fillers and the fat transfer can also be used. The cream “Scarless” represents a real alternative for the laser and other treatments to reduce acne scars. The results can be compared with the laser and other acne scar treatments. It has many advantages: no side effects, the results are seen very fast, it is safe, there is no downtime, it is suitable for any skin type, and it cures acne, and reduces postinflammatory redness. It is a treatment almost anybody can afford. Although the cream “Scarless” cannot replace lasers, it may be a valuable alternative for the acne scar reduction.

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