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**THE EVALUATION ON THE CORRELATION OF ACNE AND DIET**

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Acne vulgaris is a multifactorial inflammatory skin disease caused by the excessive secretion of sebum and follicular plugging in the pilosebaceous unit (PSU). The underlying mechanism for initiation and propagation of Acne Vulgaris is complicated as it has both internal and external triggers. Nevertheless, the main cause is the increased secretion of sebum and the atypical desquamation of the epithelial cells. Acne is known to be the eight most prevalent disease worldwide and it's approximated to affect 9.4% of the global population and many individuals claim to have acne and their diet affecting its exacerbation and pathogenesis, especially high glyceamic diets.

The main focus of this review is to critically analyze the relationship between acne and diet using information from primary studies carried out to investigate this association. The most important factor in our diet which affects acne exacerbation and proliferation is the glyceamic index of food in this review its discovered that food with high glyceamic index contributes to acne exacerbation where as food with low glyceamic index suppresses acne proliferation. It was also discovered that vitamins and minerals have a positive effect on Acne Vulgaris, such as natural isomers of retinoic acids and Zinc. Retinoids originate from the metabolism of Vitamin A and it has a crucial role in keeping the skin healthy as well as hair and nails. Vitamin A and D also have an important effect in the keratinocyte biology which can be vital in acne proliferation. Milk although has a low glyceamic index it's known to increase the levels of insulin-like growth factor-1 (IGF-1) which leads to the development and exacerbation of acne. Molecules such as TGF-  $\beta$ , glucocorticoids, hormone peptides like thyrotropin and compounds similar to opiates are present in milk and these acts on PSU which can aggravate acne. This review highlights the effect of hormones on acne, since there are many hormones related to the pathogenesis of acne especially androgens and other hormones such as progesterone, adrenocorticotropic hormone, corticotropic releasing hormone, melanocortins, growth hormones, glucocorticoids, insulin and IGF-1 and these hormones are affected by our diet which in turn subsequently affects the proliferation of Acne Vulgaris.

However further research in nutritional and hormonal studies related to acne should be carried out to shed more light in this area of study investigating the relationship between hormones, diet and acne. The relationship between genetic predisposition and acne could also be investigated and dermatologists and nutritionists could also take into account the effects of diet on acne. Therefore, in this review it can be hypothesized that diet affects hormones and this influences acne development.