



HYDROQUINONE

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Hydroquinone is a topical skin-bleaching agent used in the cosmetic treatment of **hyperpigmented skin** conditions. The effect of skin lightening caused by hydroquinone is reversible when exposed to sunlight and therefore requires regular use until desired results are achieved. Various preparations are available including creams, emulsions, gels, lotions and solutions. It is available over the counter in a 2% cream and can be prescribed by your dermatologist in higher concentrations.

Mechanism: Hydroquinone produces reversible lightening of the skin by interfering with melanin production by the melanocytes. Specifically, inhibition of the enzymatic conversion of tyrosine to DOPA (dihydroxyphenylalanine) results in the desired chemical reduction of pigment. Ultimately, this causes a decrease in the number of melanocytes and decreased transfer of melanin leading to lighter skin.

Uses: Popularized by its usage as a photo-developer, hydroquinone can be used in any condition causing **hyperpigmentation**. Common conditions include **melasma**, freckles, **lentiginos**, age spots and **acne** scars. Skin sensitivity to hydroquinone may be determined before treatment by applying a small amount of cream to the hyperpigmented area and noting any redness or itching. If no reaction occurs, initiate treatment. As a general rule, always ensure the area is clean and dry then apply a thin film to the lesion and rub it into the skin well. Hands should be washed after the application to avoid unwanted lightening of the fingers.

To maintain the desired affect, hydroquinone should be used concurrently with a strong **sunscreen**. Many preparations are available as a combination product. Lightening of the skin should be noticed within 4 weeks of initiation, if no change is seen in 3 months, contact your dermatologist for further recommendations.

Side Effects: Normally hydroquinone is very well tolerated, however side effects may be seen. These include dryness, irritation, pruritus, erythema, and a mild irritant contact dermatitis. Furthermore, remember to avoid contact with eyes and use sparingly on the face. Prolonged usage of hydroquinone has been associated with **ochronosis**, a blue-black pigmentation with caviar-like papules on the skin.

This information has been provided to you compliments of the American Osteopathic College of Dermatology and your physician.

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