

# Steroids - A Literature Review

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**Abstract-** Corticosteroids, such as prednisone and cortisone, are a class of drugs that can effectively reduce inflammation. However, they also cause a range of side effects that limit their use. Steroids are strong medicines, and they can have side effects. Because of this, it is important only to take corticosteroids if there are no viable alternatives.

**Key Words:** Corticosteroids, Inhalers, Injection, Tablets, Asthma, Steroid.

## I. INTRODUCTION:

The term steroid applies to a wide range of molecules with varying physiological effects. More specifically, corticosteroids are a class of chemicals encompassing both laboratory-synthesized and naturally produced hormones. [3,4]

The word has different meanings. Steroids are chemicals, often hormones, that your body makes naturally. They help your organs, tissues, and cells do their jobs. You need a healthy balance of them to grow and even to make babies. "Steroids" can also refer to man-made medicines. The two main types are corticosteroids and anabolic-androgenic steroids. [2]

In this article, we take a look at the types of steroids, their uses & Side Effects.

## II. AIMS AND OBJECTIVES:

1. To understand the concept of Corticosteroids.
2. To review the literature of Types, Uses and Side Effects of Steroids.

## III. MATERIALS AND METHODS:

Available textbooks, handbooks, e-books, search engines like Google, original research articles from various high impacting international peer reviewed journals etc. were the sources utilized for understanding the concepts under study.

## IV. LITERATURE REVIEW:

**Definition-** Corticosteroids are man-made drugs that closely resemble cortisol, a hormone that your adrenal glands produce naturally. Corticosteroids are often referred to by the shortened term "steroids." Corticosteroids are different from the male hormone-related steroid compounds that some athletes abuse.

### Types-

- Tablets and liquids – such as prednisolone.
- Inhalers – such as beclomethasone and fluticasone.
- Nasal sprays – such as beclomethasone and fluticasone.
- Injections (given into joints, muscles or blood vessels) – such as methylprednisolone.
- Creams, lotions and gels – such as hydrocortisone skin cream [1]

How do Steroids work - Steroids work by decreasing inflammation and reducing the activity of the immune system. Inflammation is a process in which the body's white blood cells and chemicals can protect against infection and foreign substances such as bacteria and viruses. In certain diseases, however, the body's defence system (immune system) doesn't function properly. This might cause inflammation to work against the body's tissues and cause damage. Signs of inflammation include:

- Redness.
- Warmth.
- Swelling.
- Pain.

Steroids reduce the production of chemicals that cause inflammation. This helps keep tissue damage as low as possible. Steroids also reduce the activity of the immune system by affecting the way white blood cells work. [1]

### USES-

Corticosteroids have several different effects on the body, which means that they can treat a range of medical conditions. They can reduce inflammation, suppress overactive immune system responses, and help with hormonal imbalances.

Corticosteroids are fast-acting in the body, which makes them useful for treating sudden, severe symptoms. For example, they can effectively manage allergic responses.

These drugs can also suppress the immune system, which makes them helpful for treating autoimmune diseases.

Some conditions that corticosteroids can help treat include:

- asthma

- allergies
- eczema
- psoriasis
- chronic obstructive pulmonary disease (COPD)
- inflammatory bowel disease, which includes Crohn's disease and ulcerative colitis
- multiple sclerosis (MS)
- lupus
- Addison's disease
- rheumatoid arthritis [6]

#### **SIDE EFFECT-**

Long-term use of corticosteroids can have side effects that include:

- acne
- weight gain
- bruising
- mood disorders, including depression
- high blood pressure
- diabetes
- osteoporosis
- cataracts
- glaucoma
- liver damage [6]

#### **V. DISCUSSION AND CONCLUSION:**

Corticosteroids are effective in suppressing the immune system and reducing inflammation. They are useful for a variety of conditions, particularly when prompt treatment is necessary. Both long-term and short-term use of corticosteroids can have side effects, some of which are serious. It is important only to take corticosteroids if there are no viable alternatives.

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