

Claman H N. Corticosteroids and lymphoid cells.

N. Engl. J. Med. 287:388-97, 1972.

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This paper reviewed the physiologic and pharmacologic effects of glucocorticosteroids on lymphoid cells and immunologic variables. It emphasized the differences between corticosteroid-sensitive and -resistant species and the effects of steroids on antibody production and cell-mediated immunity, on T and B cells, and on inflammation. [The SCJ® indicates that this paper has been cited in over 645 publications since 1972.]

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October 31, 1984

I wrote this review for several reasons. First, as a clinician who used glucocorticosteroids for treatment, I wanted to learn how they might work, and I found "the literature" confusing. Second, I wanted to dispel some of the confusion resulting from the failure to recognize that the lymphocytes from some species were resistant to lysis by steroids, while those from other species were sensitive. At that time, the usual explanation for the lymphopenia following corticosteroid treatment was that the drug lysed the lymphocytes. We had recently completed some experiments that indicated that this was not true of human lymphocytes, including thymocytes (although it was true of

mouse lymphocytes). Furthermore, we had evidence from the mouse that the steroid-resistant cells in that species had their traffic patterns changed by steroids. That is, steroid treatment caused an anatomic redistribution of lymphoid cells. (These findings were soon to be confirmed in steroid-resistant species, namely, the guinea pig and man.) I wanted to put the misconceptions and the new facts in proper perspective, so I included a little information concerning the role of steroid receptors in steroid responses.

A third and perhaps more important reason for writing this review was that I had taken a position as associate dean at our medical school. Although it was just a half-time position, I was only about 40 years old then and had recently recognized that this move was a mistake for me insofar as the rest of my academic career was concerned. I decided to review corticosteroids as an antidote to my administrative activities. In fact, it worked quite well.

The article has been often cited for a variety of reasons. Corticosteroids are indeed "miracle drugs" and physicians want to know how they work. Immunology was (and still is) a "hot" topic, and I was able to incorporate some of the newest work on the distinctions between T and B cells—an area that I had helped to elucidate in the 1960s.¹ I included information on *in vivo* as well as *in vitro* work, on animal models, and on human disease. I brought together a diversity of references, some of which were not easy to find. Finally, there was no other review that covered these topics and was current. Of course, it has a number of sections that are obsolete. A more recent review is that of J.E. Parrillo and A.S. Fauci.²

1. Claman H N & Chaperon E A. Immunologic complementation between thymus and marrow cells—a model for the two-cell theory of immunocompetence. *Transplant. Rev.* 1:92-113, 1969. [See also: Claman H N. Citation Classic. *Current Contents/Clinical Practice* 10(36):22, 6 September 1982.]
2. Parrillo J E & Fauci A S. Mechanisms of glucocorticoid action on immune processes. *Annu. Rev. Pharmacol. Toxicol.* 19:179-201, 1979.