

## **Danazol**

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Danazol, a synthetic androgen with weak (“impeded”) androgenic effects, has in the past been suggested for the treatment of canine immune-mediated hemolytic anemia and immune-mediated thrombocytopenia, in combination with glucocorticoids, in order to reduce the dose of steroid that is needed. Danazol is derived from the synthetic steroid ethisterone, a modified progestogen. Danazol’s most important mechanism of action is probably to reduce macrophage Fc receptor/antibody binding affinity. Danazol also competes with glucocorticoids for combination with steroid-binding globulin, consequently increasing the availability of active unbound glucocorticoid. Concurrent danazol therefore enables significant glucocorticoid dose reduction. Danazol may also reduce the degree of binding of antibody and complement to the red blood cell or platelet surface. Side effects are uncommon, and include hepatotoxicity and masculinization of female dogs. However, although some dogs with refractory IMHA and IMT have been reported to benefit from danazol, the drug fell out of favor a few decades ago, probably because it was very expensive at the time, and response to therapy was sluggish and highly unpredictable.

Reported oral danazol doses in dogs with IMHA or IMT, in combination with glucocorticoids, range from 5 to 15 mg/kg daily, either given as a single dose or 2-3 divided doses. Danazol comes in 50 mg, 100 mg, and 200 mg capsules. Danazol currently costs about \$3 for a 50 mg capsule, and not much more for the 200 mg capsule.