

# **INOSINE PRANOBEX**

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## **Introduction**

Inosine pranobex is a synthetic compound of the p-acetamido-benzoate salt of N-N dimethylamino-2-propanol with inosine in a 3:1 molar ratio. It is also known as inosine acedoben dimeprano, Isoprinosine or methisoprinol.<sup>1</sup>

Researches have shown that it has antiviral and immunomodulatory properties.<sup>1</sup>

## **Mechanism of Action**

### Immunomodulatory property

Inosine pranobex induces TH1 response resulting to T lymphocyte maturation, differentiation and enhanced lymphoproliferative response. It also regulates activity of CD8+ suppressor and CD4+ helper cells functions . It increases levels of IL-2, interferon-gamma and tumor necrosis factor -alpha while levels of IL-4,IL-5 and IL-10 were decreased. It also improved neutrophil chemotaxis and phagocytosis<sup>2,3,4,5,6</sup>. Its effect in regulating T helper cells leads to stimulation of B cells to differentiate into plasma cells leading to an enhanced antibody production<sup>7,8</sup>.

### Antiviral property

Inosine pranobex also showed an increase in the level of natural killer (NK) cells with increased activity.<sup>5,6</sup> It was also observed to inhibit replication of several RNA and DNA viruses.<sup>9</sup>

## **Clinical Studies**

No clinical studies have been conducted yet for the treatment of COVID-19. There is one clinical trial, though, on its use as immunoprophylaxis for healthcare workers with exposure to COVID-19. This, however, is beyond the scope of this review.

## **Recommended dose**

The usual dose ranges from 25 to 100 mg/kg in single or divided doses.<sup>11,12,13</sup>

## **Adverse Effects**

Inosine pranobex has a good safety profile with reported adverse events lower than the placebo group.<sup>10</sup>

## Conclusion

There are no studies conducted on the use of inosine pranobex for treatment of COVID-19 cytokine storm.

## REFERENCES:

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