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## Acute phase proteins indicate sarcoptic mange severity in Iberian ibex



The acute phase proteins (APP) are serum proteins whose concentrations may vary because of diseases or stress. A study has analysed the concentrations of APP in healthy Iberian ibexes and others affected by sarcoptic mange. The results show that infested ibexes have higher levels of some APP, and the more severely affected ibexes have higher APP levels. These results are different from those obtained in similar species, so further studies are needed in order to better understand APP variations.

Iberian ibex (*Capra pyrenaica*). The one on the left is scratching itself because of mange, the one on the right is healthy.

Sarcoptic mange is a contagious skin disease that affects several mammal species all over the world, including humans. In some wild ungulate species, like the Iberian ibex (*Capra pyrenaica*), it can cause high mortality.

Haptoglobin (Hp), serum amyloid A (SAA), and alpha-1-acid-glycoprotein (AGP) are acute phase proteins (APP), i.e. serum proteins whose concentrations vary because of infection, inflammation, neoplasia, trauma or stress. In this study, Hp, SAA and AGP concentrations were determined in serum samples of 131 Iberian ibex captured in Sierra Nevada National and Natural Park between 2005 and 2012, including healthy and sarcoptic mange-affected animals.

No differences in Hp were found between healthy and infested ibexes, but SAA and AGP were higher in the scabietic than in the healthy ibexes. In addition, the more severely affected ibexes had higher SAA and AGP concentrations than those with lower skin lesions. In Alpine ibex (*Capra ibex*), a similar species, APP increases due to mange are higher, which could perhaps be related to differences in skin lesions or differences between species or populations.

In conclusion, SAA and AGP concentrations increase with sarcoptic mange infestation and severity in Iberian ibex, although further studies are needed in order to clarify the reasons for the differences found in the intensity of APP variations among species.

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### References

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