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## Veterinarni Medicina

**Prevalence and breeding values of elbow dysplasia in the Estrela mountain dog**

Alves-Pimenta S, Colaco B, Silvestre AM, Ginja MM:

Veterinarni Medicina, 58 (2013): 484-490

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The aims of this study were to determine the prevalence and heritability of elbow dysplasia in the Estrela mountain dog breed, to investigate genetic trends over the last 20 years (1990–2009) and to evaluate the association of individual records with breeding values. The elbows of 351 Estrela mountain dogs were examined using the flexed mediolateral radiographic view and evaluated using the International Elbow Working Group scoring system. Heritability and breeding values were estimated using a linear model. Elbow Dysplasia was found in 16.5% (59/351) of the dogs; males (27%, 34/127) were more affected than females (11%, 24/224) ( $P < 0.05$ ). The heritability

was very low (0.065) and the genetic trend showed a slight positive slope with an improvement in 2004 and 2005. The mean breeding values in elbow dysplasia grades were different but the overlap among grades was very pronounced. The prevalence and heritability of elbow dysplasia in the breed are thus low. Mass selection using individual phenotypes may not be effective. Elbow dysplasia genetic trends are similar to trends for hip dysplasia and passive hip laxity, so the use of selection against hip dysplasia may also result in genetic progress for elbow dysplasia.

## **Keywords:**

osteoarthritis; heritability; genetic trend; radiology; screening program

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