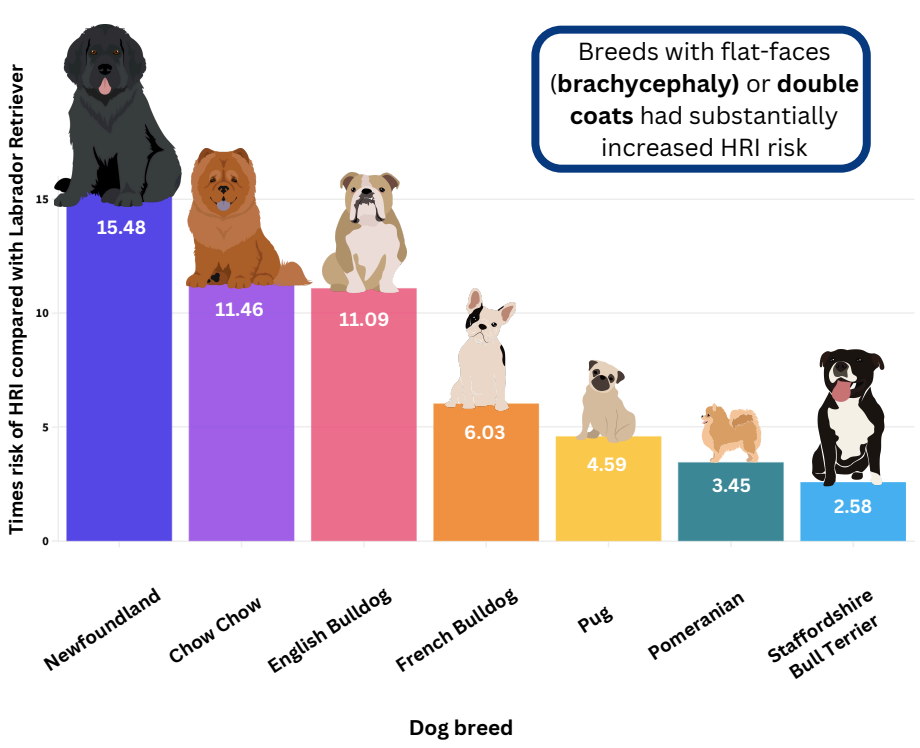
Hot Dogs: Heat-related illness (heatstroke) in UK dogs

The UK experienced its hottest year on record in 2022, with the first ever ambient temperatures over 40.0˚C. Human heat-related fatalities reached a record high in England, while Europe reported over 70,000 excess deaths. Heat-related illness (HRI) occurs when the body gets so hot it can no longer control its own temperature downwards again and is considered a medical emergency. To explore the impacts on dogs, this study explored the frequency, risk factors, triggers and fatality of heat-related illness (HRI) in dogs presented for UK emergency veterinary care in 2022.

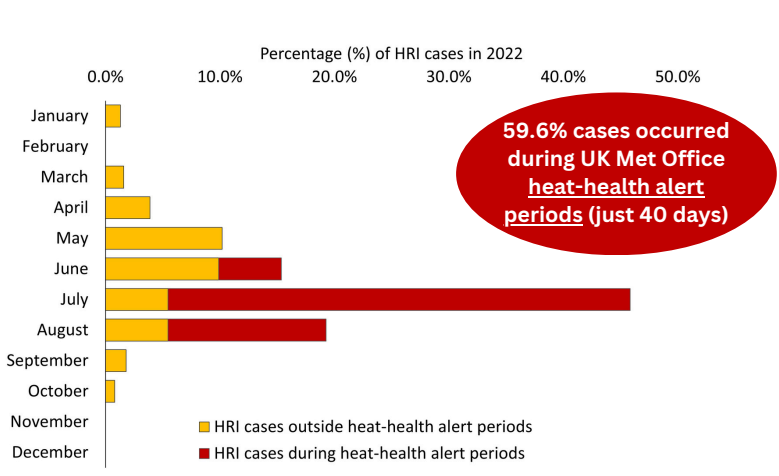
The study included anonymised clinical records from 167,751 dogs under emergency care at Vets Now practices within VetCompass. Dogs diagnosed with HRI were identified and compared against dogs not diagnosed with HRI. Further clinical information was manually extracted for all confirmed cases.

Dog breeds at higher risk of heat stroke

Breeds with flat-faces (**brachycephaly)** or **double coats** had substantially increased HRI risk

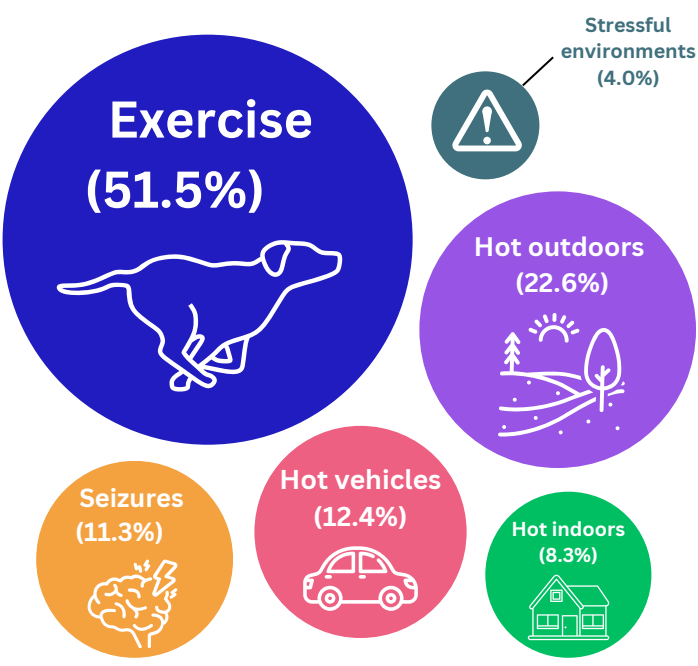


Which months have the greatest HRI risk for dogs?



Triggers of heatstroke in dogs

Percentage of HRI cases with each trigger recorded in the dog's clinical history (9.5% had multiple triggers recorded):



Dogs with physical features such as flat faces and double coats are particularly vulnerable to heatstroke. This risk rises dramatically during heatwaves.

As climate change drives up ambient temperatures in the UK and around the world, both human and canine populations face growing health challenges related to heat.

It is crucial to avoid breeding dogs based on extreme physical features and for owners to avoid known triggers of heatstroke during heat-health alert periods.

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RVC VetCompass https://www.rvc.ac.uk/vetcompass carries out welfare research based on anonymised clinical information shared from over 30% of UK veterinary practices. We are very grateful to the owners and veterinary professionals who contribute to VetCompass research