There have been reports of cats with CNS deficits and/or blindness after the use of spring-loaded mouth gags. Compression of the maxillary arteries (principal blood supply to feline eyes and brains) can result from opening the mouth too wide; this can cause cerebral and retinal ischemia. Electroretinography (ERG), distance force, and magnetic resonance angiography (MRA) data were collected from 6 healthy cats with and without the use of mouth gags. Measurements were obtained over a 5-minute period and included those produced during submaximal (using plastic mouth gags of 20, 30, and 42 mm in length between the canine teeth) and maximal opening of the mouth using a spring-loaded 7.6-mm mouth gag. There was no change in ERG waveforms during partial mouth opening; however, 1 cat had a reduced MRA signal intensity when the 42-mm gag was used. During maximal mouth opening, MRA signal reductions were observed in 4 cats and alterations in ERG waveforms, consistent with circulatory compromise, were noted in 1 cat. Maximal reductions of ERG waveforms were reached by the third minute after gag application in each cat but returned to normal within 30 seconds after removal of the mouth gag.

Commentary
Practically speaking, visualization is a major obstacle to efficiently performing dental procedures in cats. Using mouth gags to prop the jaws open improves visualization; however, the patient lacks the natural ability to resist hyperextension. Instead of relying on the prying action of a mouth gag, practitioners should consider having an assistant retract tissues to improve visualization. An alternative is gently propping the mouth open using a custom-sized cut syringe barrel positioned between the maxillary and mandibular canine teeth or using a commercially available rubber bite block designed to be positioned between the caudal cheek teeth to maintain the opened-mouth position.—Christopher Snyder, DVM, DAVDC

Source