

Research may explain how diabetes service dogs sense hypoglycemia (Gizmodo) 8/27

University of Cambridge researchers have discovered that service dogs, used by diabetics to help prevent hypoglycemic (low blood sugar) emergencies, likely detect a natural chemical, called isoprene, which is found in human breath. Isoprene levels rise as blood sugar decreases in people with diabetes. Researchers hope that with this knowledge a medical sensor could be developed which could replace the current finger prick tests.

Comment: While a medical sensor might be useful and nice, I doubt it could completely replace these types of service dogs and the work they do. SEM

Engineers tackle problem of canine car safety (Detroit Free Press) 6/30

Millions of dogs and cats travel in cars with their owners, with dogs being the most common car companion, yet there are no industry safety standards for canines. The Center for Pet Safety has partnered with auto industry supplier Johnson Controls to develop solutions. Johnson Controls aims to spend a year studying dogs of various breeds and sizes to come up with designs and standards that could help make vehicles safer for pets, but it could take up to 10 years for these designs and standards to be used universally.

Comment: Child car safety standards that we have now have saved many children's lives. If standards and designs can be developed for dog car travel, it will be very helpful for owners to know what the safest way to travel with their pet is. SEM

Multimodal approach might prevent heartworms better than monotherapy (DVM360.com) 8/11

New research conducted by an University of Georgia College of Veterinary Medicine professor found that applying a topical repellent-insecticide plus an oral heartworm preventative is more effective at preventing heartworm infection than by either alone. The study looked at the use of Vectra and Interceptor together and found that no dogs in the group that used both products together developed heartworm disease when infected with milbemycin resistant heartworm. Several dogs developed heartworm in those groups that used either Vectra or Interceptor alone.

Comment: This was a small study looking at the use of just two of the many heartworm and flea and tick products on the market, I am sure it will be performed looking at other products on the market as well. It seems intuitive that using a two pronged attack – preventing mosquitoes from biting and preventing heartworm larvae from maturing -would have better results than using either alone to prevent heartworm disease – very similar to the use of Lyme vaccinations and flea and tick preventatives to prevent Lyme disease. SEM

Chemical exposure might underlie reproductive problems in dogs, people (The New York Times (free-article access for SmartBrief readers)) 8/9 (The Guardian (London)) 8/9, (New Scientist (free content/The Press Association (U.K.)) 8/9

Over the past 26 years scientists have been tracking the male reproductive health of 5 breeds of dogs that have been raised as service dogs. The study looked at male fertility and noticed a 30 % decline in sperm motility – although this was not associated with a decrease in impregnation rate – and while they also noted a 10 % increase in the incidence of cryptorchidism the rate was still quite low – just 1 %. During the same period an increase in female puppy deaths was also noted. Testicles from dogs in the study that were neutered for various reasons were chemically analyzed and found to contain chemicals from electrical transformers, paint and plastic. These same chemicals were found in the dogs’ semen and trace amounts were also found in the food the dogs were being given. Speculations as to how these chemicals get into the dog are varied but environmental contamination is possible. Further studies looking at female ovaries are planned for the future.

Comment: This is an interesting study and one to keep an eye out for updates on. The old adage: You are what you eat may be very apropos here. SEM

Rapamycin has positive effect on heart function in initial trials (The Telegram (London) (tiered subscription model)) 8/15

A small study, utilizing 24 dogs, performed at the University of Washington showed that an anti-rejection drug, rapamycin, improved heart function without significant side effects. Rapamycin has an anti-inflammatory effect and also helps cells get rid of waste, clearing it from the body. More long term studies will be done to see if the use of this drug can increase the dogs’ lifespan, with the hopes that one day it may do the same for humans.

Comment: An interesting study looking for the “fountain of youth”. Only time will tell. SEM