It sounds like science fiction, doesn't it? But we are now learning how to improve both the lifespan and, more importantly, the HEALTHspan of both humans and pets. There is nothing more important, and here's what 30 years of clinical practice and an inquiring mind

Here's the deal. There is a BUNCH of evidence that shows we CAN help our pets live longer lives. How?

- LIFESTYLE -- weight maintenance, low-impact exercise, choosing where to exercise.
- UNDERSTANIDING BREED RISKS Chihuahuas are not just small St. Bernards.
- DIET -- Feeding to manage weight, ketogenic diets, intermittent fasting, and food quality
- MEDICAL -- Reducing Inflammation: Aggressive dental care, minimizing pesticides; understanding pros and cons of vaccines and medications.
 - SUPPLEMENTS -- CURCUMIN, berberine, UC-II, and CBD
 - DRUGS USED WISELY -- <u>RAPAMYCIN</u>, <u>ACARBOSE</u>, and <u>METFORMIN</u>

So now let's explore those topics in a little more detail...

1) LIFESTYLE:

- Fat actually makes its own inflammation. Enough said.
- Think now about your dog's joints a decade from now. Low impact exercise will keep
 your dog more comfortable as they age, reduce inflammation, and reduce the need
 for pain relief drugs with side effects. The more "flyball" or flying Frisbee catches
 your dog enjoys, the shorter their orthopedic life.
- Exercise location: think about...
 - Orthopedics: level ground with good footing;
 - Fleas: cause both inflammation and misery, and require the use of toxins to eradicate.
 - If you don't see weeds, maybe you shouldn't walk there. RoundUp and WeedNFeed products, both have been linked to cancer in dogs. Many groundskeepers at public parks and golf courses use such products every day on the areas your dog may frequent.

2) UNDERSTANDING BREED RISKS— HERE ARE SOME FUN GENERALIZATIONS FOR YOU!!

 The primary health risk for dogs under 20# is dental disease, which has been shown to reduce lifespan by 15% in humans. The solution? Routine anesthetic dentals beginning at 3 years of age.

- The primary health risks for dogs over 50# are orthopedic disease and cancer. How to minimize them? Judicious exercise, avoid obesity, supplement with curcumin and UC-II
- Long wheelbase dogs, like Dachshunds and Corgis, are poster children for spinal disease. How to minimize that? Keep them thin, and AVOID jumping or stairs. Really.
- Floppy eared dogs are prone to painful ear inflammation. The solution? Routine weekly ear flushes, keep the ear hair trimmed short.
- Cats: Dental disease is a really big problem. Avoid vaccines unless absolutely needed.

3) DIET:

- Don't make your dog fat. Enough said.
- The better quality your dog's food, the longer they will live. One study has proven that, all else being equal, *dogs fed home cooked diets live longer* than those fed from a bag or can.
- In general, fish diets create less inflammation than poultry, and poultry is better than any red meat.
- Intermittent fasting (no food for 14-18 hours, then two meals in 8-10 hours) has been proven in humans to extend healthspan and reduce cancer. This pattern would be common for ancestral dogs.
- Ketogenic diets appear to have similar benefits. This is an area that I am actively studying right now.

4) MEDICAL:

- The single most important thing you can ask your vet is "WHY". Why should we use this vaccine, why should we treat this, why should we do surgery.
- The whole goal of medicine should be to **REDUCE INFLAMMATION** in your pet, but many veterinarians fail to recognize that. What causes inflammation? Dental disease, allergies, vaccines, arthritis
- Recognize that VACCINES ARE DESIGNED TO CREATE INFLAMMATION so understand what diseases your pet is at risk for and vaccinate against them.
 Recognize what diseases your pet is NOT at risk for, and avoid those vaccines.
- Recognize the pros and cons of applying or ingesting chemical pesticides. The benefits? Minimizing parasites... and that is significant if you live in a flea/tick endemic area. The negatives? Cumulative exposure to toxins can predispose our pets to liver and kidney disease, and cancer.
- Consider the pros and cons of heartworm therapy. If you are in an endemic area, your pets should be on a preventive. There are mountainous or cool areas, however, where heartworm is simply not a risk.

4) SUPPLEMENTS:

<u>CURCUMIN</u>: Every pet and human should take a quality curcumin supplement. Yes, like <u>LONGEVITY PLUS</u>. Why? The most potent natural anti-inflammatory herb; actively fights cancer; reduces risks of diabetes, Alzheimer's disease, allergies, IBD... and the list goes on. 4200 studies and counting.

BERBERINE: reduces fluxes in blood sugar which set the table for diabetes and cancer. Particularly valuable for Schnauzers and pets with a history of pancreatitis.

<u>UC-II</u>: because old dogs have painful joints.... and you can help.

<u>CBD</u>: another anti-inflammatory supplement which inhibits cancer, stress,nausea, allergies, and pain. Not a bad combination.

5) DRUGS

RAPAMYCIN is a prescription drug which has been proven to extend lifespan in all species studied to date. It also is used to minimize and treat cancer. Interestingly, here is a study showing it also improved heart function in dogs with cardiomyopathy. The same study showed no adverse side effects during the duration of the study. Expensive? Yes. Prescription? Yes. But a potentially GREAT investment in your pet's healthspan? Also Yes. I just want to see more studies.

<u>ACARBOSE</u> has been proven by the rigorous ITP studies to extend lifespan. What's more, it works synergistically with rapamycin to increase longevity benefits beyond rapamycin alone. It also helps reduce blood sugar levels and maintain weight.

<u>METFORMIN</u> is another prescription drug which helps to modulate glucose flux within the body and also has been proven to fight cancer in both dogs and humans. Actively being studied for pets right now.

PAIN RELIEF IF NEEDED — Heck, we have a <u>whole page devoted to pain relief for your pets</u>. Because the stress of pain will shorten a pet's life, too. Don't prejudge the merits or risks of NSAID drug therapy— listen to what your pet tells you. If you have questions about which pain reliever is best for your pet, please email me at ktomandvm@gmail.com. I can help you.