

“Tetracyclines are an amazing class of chemical agents with huge therapeutic potential. In recent years, several studies have conclusively reported anti-inflammatory, immune-modulating and neuro-protective effects of these compounds. These studies extend over a wide range of diseases including dermatological diseases, behavior and mental disorders, immune system disorders, cardiovascular diseases, and cancer.”¹

At Plano Animal Clinic (PAC), we frequently use varying levels of doxy- and minocycline on our patients. Bacterial infections require higher levels, while moderate and lower levels are used to combat inflammation and modulate, or fine-tune, the immune system. Importantly, the moderate and lower levels of doxycycline therapy do not create bacterial resistance in a patient, even when used as long-term maintenance. Doxy- and its cousin minocycline are generally well tolerated by patients, have relatively low risk of adverse reaction, and have tremendous upside potential for improving the health of the patient. These compounds are frequently beneficial in the treatment or prevention of such diverse diseases as heart disease, cancer, infectious diseases, autoimmune diseases, allergic disorders, arthritis, neurologic disorders, spinal cord injury, periodontal disease, and the list goes on.

The question that begs asking is, “Wouldn’t most aging patients benefit from some level of doxycycline therapy?” In my opinion, the short answer is “yes”, keeping in mind that doxy- and minocycline are prescription drugs and must be prescribed and monitored by a licensed clinician. The difficulty though with doing this for a broad swath of aging patients is that doxycycline has suddenly become hard to get and extraordinarily expensive.

A few years ago doxy- was cheap and plentiful, then something changed. What changed was that numerous studies began coming out in late 2011 and 2012 extolling the virtues of low and moderate dose tetracycline therapy (principally doxy- and minocycline) in the treatment and prevention of numerous disease conditions. The implication was that chronically ill patients might significantly improve their health by taking a below-label daily dose of an inexpensive generic drug. While this may be of great benefit to the patient, it represents a conflict of interest for the pharmaceutical industry when a low-cost generic can outperform their far more expensive offerings. Simply put, healthy patients require fewer expensive drugs. On the heels of the 2011/2012 studies, doxycycline was suddenly pulled off the market. When it came back a short time later, the price had skyrocketed, with a bottle of 100mg generic doxycycline costing \$20 in October 2013 and \$1,849 in April 2014. Doing the math, this is a whopping 8,281% increase in six months.^{2,3}

“Big Pharma” has apparently succeeded now in making manufactured doxycycline virtually unobtainable, along with many other low-cost generics. With seemingly only the rich and famous being able to afford even generic medications, how will the average patient survive? The answer may lie in moving away from the standard medical paradigm. For years now at Plano Animal Clinic (PAC), we’ve tried to reduce our reliance on prescription medications, surgery and radiation through a number of alternative modalities designed to help the patient help itself (See other articles this website). Low-dose doxycycline therapy, which reduces inflammation and modulates the immune system, fits very nicely into this paradigm.

For the time being, we are able to skirt the super-inflated price of manufactured doxycycline by having it compounded for us at a regional compounding pharmacy. It is still significantly more expensive than manufactured doxy- used to be, but nowhere near what manufactured doxy- is now. As long as we are able to get doxy- and minocycline in some form at a somewhat reasonable cost, we will continue using these compounds to aid in the treatment and prevention of heart disease, cancer, spinal cord injuries, periodontal disease, and so on. If the purpose of health care is to actually restore and maintain the patient’s health, then the use of low-dose doxycycline therapy is both good medicine and common sense.

The opinions expressed are my own and do not necessarily represent the opinion of other health care professionals. The synthetic tetracyclines, doxycycline and minocycline, may function as an aid in the treatment and prevention of various disease conditions, not as cure. They are used in combination with other treatment modalities in an effort to improve the health of the patient.

1. Tetracyclines: Drugs with Huge Therapeutic Potential.
F. Bahrami, D.L, Morris, Motti Pourgholami; University of New South Wales;
Saint George Hospital; Sydney Australia; Bentham Science Publisher; 2012.
2. NBC Nightly News with Brian Williams; Lester Holt; January 2, 2015.
3. JAVMA News; Journal of the American Veterinary Medical Association; January 15, 2015.