**Cardiac Glycosides**

The **digitalis glycosides** (digoxin and digitoxin) are relatively weak inotropes, have a narrow nontoxic therapeutic range, and are associated with significantly more adverse effects than pimobendan. Digitoxin is no longer commercially available. Although used increasingly less for its inotropic effects since the introduction of pimobendan, digoxin still plays an important role in cardiac disease, particularly in atrial fibrillation or supraventricular tachycardia with concurrent CHF, because it is the only available pharmacologic agent that slows AV nodal conduction without concurrent negative inotropic effects. (For a complete discussion, see [Cardiac Glycosides](http://www.merckmanuals.com/vet/pharmacology/systemic_pharmacotherapeutics_of_the_cardiovascular_system/positive_inotropes.html#v3329391).)

Rapid (IV) digitalization commonly results in toxicity and is not recommended. Digoxin may be administered at a conservative starting dose of 0.003–0.005 mg/kg, PO, bid. Adequate serum levels are not achieved for 3–4 days, and a digoxin level should be checked 5–7 days after initiation of therapy, 8 hr after the last dose is given. Further dosage adjustments should be conservative and ultimately based on the animal's serum digoxin level and clinical response. If digoxin is used in cats, it may be started at one-fourth of a 0.125-mg tablet every third day for cats <5 kg, and every other day for cats >5 kg. Some larger cats may ultimately tolerate doses as high as one-fourth of a 0.125-mg tablet, sid. An elixir form is available, although cats generally dislike the taste.

Adverse effects are increasingly likely at higher serum levels, and generally occur in order of GI, cardiac, and CNS derangements. Because of its ability to slow electrical conduction as well as increase intracellular calcium, digoxin can cause almost any cardiac arrhythmia, and it is contraindicated in cases of AV block, significant bradycardia, and rapid ventricular tachycardia. If adverse effects are noted, the drug should be temporarily discontinued (usually for 1–2 days) and the dosage subsequently reduced by ∼30%.

SOURCE: http://www.merckmanuals.com/vet/circulatory\_system/heart\_disease\_and\_heart\_failure/heart\_failure.html