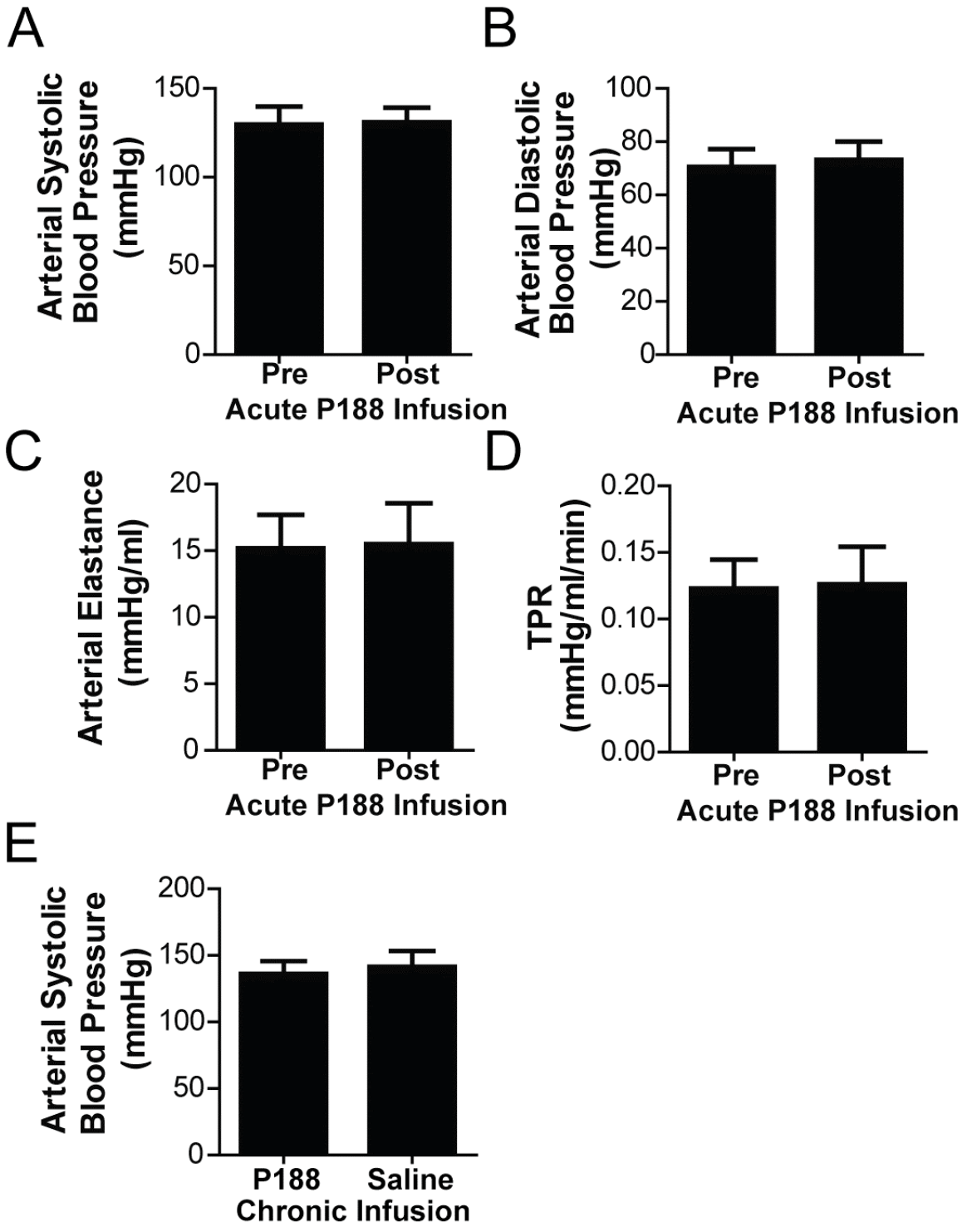

Figure S1. The effect of P188 on vascular function. **A,B.** Systemic arterial pressures are not affected by acute application of P188. **C.** Large vessel compliance (arterial elastance) is not changed by acute P188 infusion. **D.** Total peripheral resistance (TPR) is not altered by acute infusion of P188. **E.** Systemic arterial blood pressure is not altered by chronic (8 weeks) administration of P188 compared to saline infused animals.

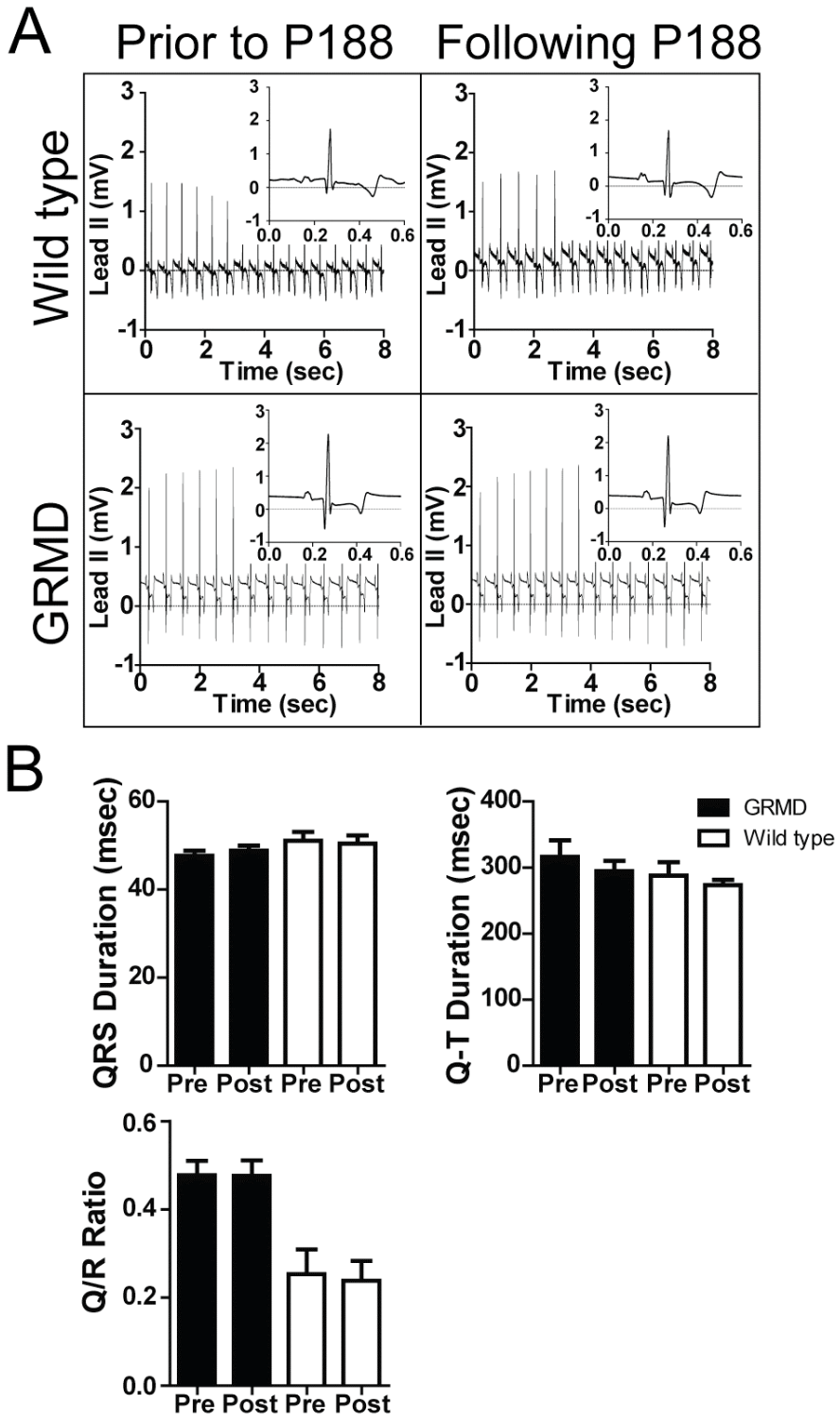

Figure S2. Electrocardiographic measurements before and after acute infusion of P188. There is no effect of P188 on the electrical activity of the heart in either wild type or dystrophic dogs. Representative lead II ECG measurements are shown in **A**, inset is an averaged waveform. Several important parameters are statistically summarized in **B**, note that the elevations in Q/R ratio are unaffected by the presence of P188.

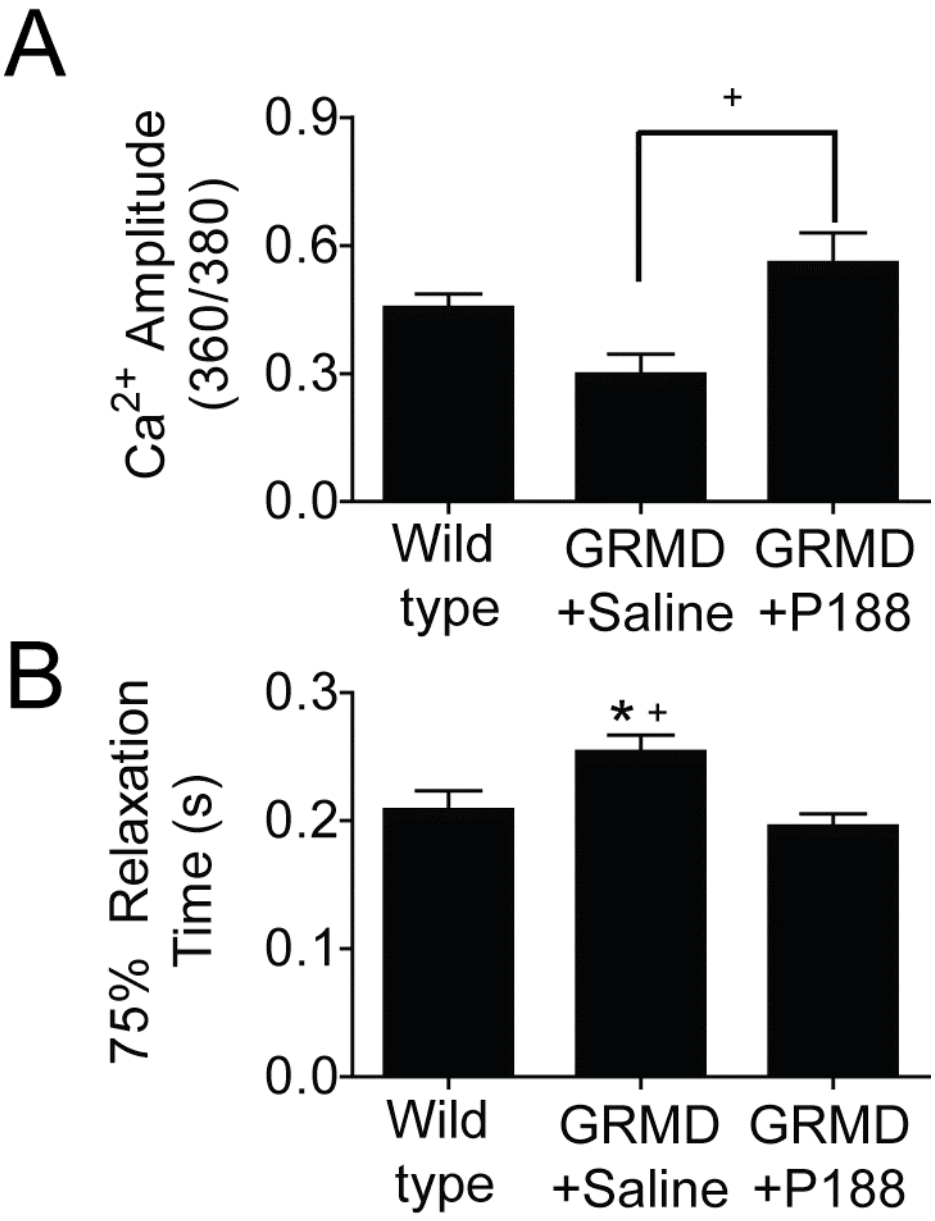

Figure S3. Calcium handling and contraction kinetics in isolated cardiac myocytes from chronically infused dystrophic dogs and untreated wild type dogs. Electrically stimulated unloaded twitch contractions of acutely isolated adult cardiac myocytes were performed. In cells loaded with Fura2, the calcium transient was measured and analyzed. It was found that the amplitude of the calcium transient was significantly greater in myocytes isolated from dystrophic dogs receiving chronic P188 (**A**). Continuous monitoring of sarcomere length during a twitch contraction provides a detailed assessment of contraction of the unloaded myocytes (**B**). It was observed that myocytes isolated from dogs receiving saline infusion had significantly prolonged relaxation kinetics compared to wild type myocytes (* denotes $P<0.05$). Myocytes isolated from dystrophic dogs treated with chronic P188 had normalized relaxation kinetics (+ denotes $P<0.05$).

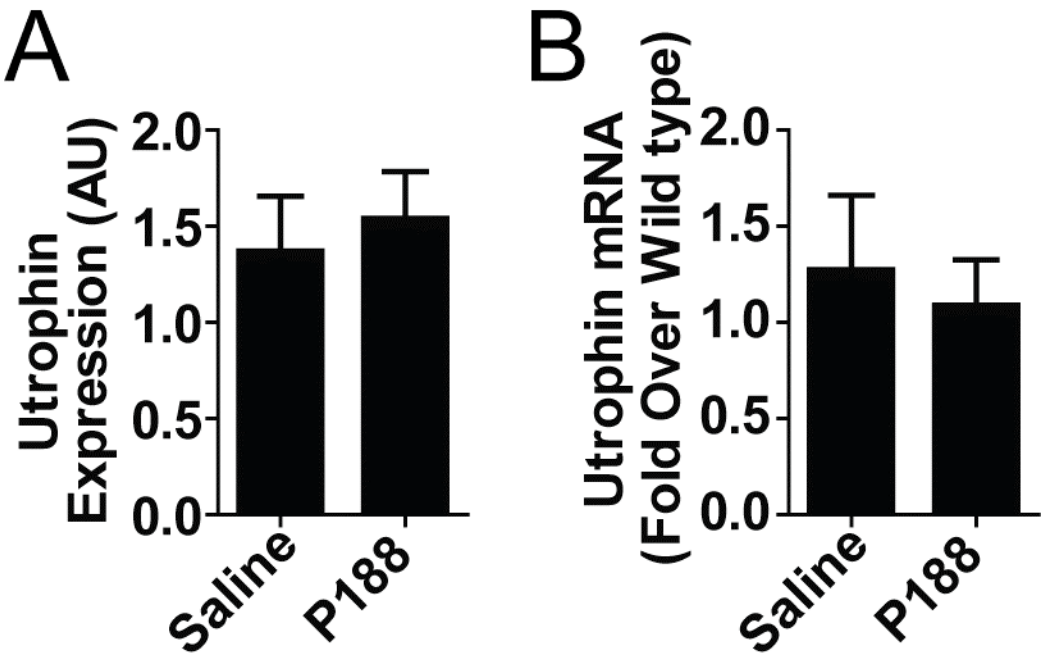

Figure S4. Effects of chronic infusion upon the expression of utrophin. Following an 8-week infusion the expression of utrophin was not different between saline and P188 treated groups at the protein (**A**) or mRNA (**B**) levels.