Autism spectrum disorder (ASD) is often accompanied by gastrointestinal (GI) disturbances, which also may impact behavior. Alterations in autonomic, endocrine, and immune system functioning are also frequently observed in ASD, however, the relationship between these findings in ASD is not known. We examined the relationship between GI symptomatology, examining upper and lower GI tract symptomatology separately, ANS functioning, and salivary cortisol at baseline and in response to stress in a sample of 120 children with ASD. This results from this study suggest that systems involved in the response to mild stimuli are different in individuals with ASD and co-occurring GI issues, especially for constipation; although it is not possible to assess causality in this data set. Future work should examine the impact of treatment of GI problems on autonomic function and anxiety, as well as the impact of anxiety treatment on GI problems. Thus, clinicians should be aware that GI problems, anxiety, autonomic, endocrine, and immune dysfunction may cluster in children with ASD and should be addressed in a multidisciplinary treatment plan.