8-OH-DPAT elicits hyperphagia via the activation of 5-HT$_{1A}$ somatodendritic autoreceptors in the midbrain raphe nuclei with the increase in eating resulting from an apparent reduction in 5-HT synthesis and release. Several recent studies indicate that systemic administration of the non-selective nitric oxide synthase (NOS) inhibitor L-NAME and the neuronal NOS inhibitor 7-NI suppress eating elicited by subcutaneous injections of 8-OH-DPAT. Previous reports also indicate that these same NOS inhibitors decrease eating elicited by chlordiazepoxide, morphine and 2-deoxy-D-glucose. The present study was designed to examine the central interaction of NOS inhibition and 8-OH-DPAT. In male rats ($n=8-10$ group), systemic or dorsal raphe injections of L-NAME and 7-NI inhibited eating resulting from dorsal raphe 8-OH-DPAT administration. All drugs were administered during the mid-light cycle and food intake was measured 2 h postinjection. Moreover, at higher doses, L-NAME and 7-NI alone suppressed food intake. These data suggest that central nitric oxide may modulate feeding sensitive circuitry within the dorsal raphe and specifically interact with 5-HT$_{1A}$ receptor mechanisms.