



## Parasympathetic Abnormalities as Post-Polio Sequelae: Vagus Caveat.

Drs. Nancy M. Frick, M.Div, LhD and Richard L. Bruno, HD, PhD  
Archives of Physical Medicine and Rehabilitation, 1995; 76: 594.

Damage to both the sympathetic and parasympathetic nervous systems results from poliovirus infection. However, damage to the parasympathetic nervous system as a cause of new symptoms in polio survivors has been overlooked. The cause and management of parasympathetic abnormalities in polio survivors that can cause symptoms that are discomforting and may even be life-threatening will be presented.

It is well known that the poliovirus damaged the autonomic nervous system. Cardiovascular collapse, even without respiratory failure, was a frequent cause of death in acute bulbar polio. Recently, attention has focused on the cold intolerance reported by 50% of polio survivors and their cold, purple "polio feet" caused by partial sympathetic denervation of smooth muscle around peripheral veins.

Damage to the parasympathetic nervous system as a cause of Post-Polio Sequelae has been overlooked. Presented are data from a national survey of polio survivors showing an incidence of diarrhea (9.1%) and constipation (15.5%) and diagnoses of ulcer disease (13.3%) and colitis (10.1%) that were between three and six times higher than in the general population. Also presented are cases of acute G.I. problems - paralytic ileus and diarrhea with nausea that precipitated syncope and asystole - in polio survivors. A possible relationship between G.I. problems and poliovirus-induced damage to the anterior hypothalamus and brain stem vasomotor control centers will be described. Clinical caveats in the management of polio survivors with symptoms indicative of decreased or increased vagal tone will be discussed

[The Encyclopedia of Polio and Post-Polio Sequelae](#) contains *all* of Dr. Richard Bruno's articles, monographs, commentaries, videos and "Bruno Bytes"  
<https://www.papolionetwork.org/encyclopedia.html>

Are you looking for a specific topic? The Encyclopedia Index (By Subject) is available. [HERE](#)