Enteroviruses (Coxsackie A and B, echovirus, poliovirus) belong to a group of small RNA-viruses, picomavirus, which are widespread in nature. Enteroviruses cause a number of well-known diseases and symptoms in humans, from subclinical infections and the common cold to poliomyelitis with paralysis. The development of polio vaccines is the greatest accomplishment within the field of enterovirus research and the background work was awarded the Nobel prize in 1954. New knowledge implies that enteroviruses play a more important part in the morbidity panorama than was previously thought. Chronic (persistent) enteroviruses were formerly unknown. Serologic and molecular biology techniques have now demonstrated that enteroviral genomes, in certain situations, persist after the primary infection (which is often silent). Persistent enteroviral infection or recurrent infections and/or virus-stimulated autoimmunity might contribute to the development of diseases with hitherto unexplained pathogenesis, such as post polio syndrome, dilated cardiomyopathy, juvenile (type 1) diabetes and possibly some cases of chronic fatigue syndrome.