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## **A Review on Charcot-Marie-Tooth Disease**

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Abstract: Charcot-Marie-Tooth (CMT) disease is a group of inherited peripheral neuropathies characterized by progressive muscle weakness, sensory loss, and foot deformities. It is caused by mutations in genes responsible for myelin sheath formation or axonal function, leading to impaired nerve conduction and muscle atrophy. CMT is classified into demyelinating (CMT1), axonal (CMT2), and intermediate forms based on electrophysiological and genetic findings. Clinical manifestations include foot drop, high-arched feet, hand weakness, and reduced reflexes, with symptoms typically appearing in childhood or early adulthood. Diagnosis is based on clinical evaluation, nerve conduction studies, and genetic testing. While no cure exists, treatment focuses on symptom management through physical therapy, orthotic support, pain management, and, in some cases, surgical intervention. Advances in genetic research and potential therapies, including gene therapy and neuroprotective strategies, hold promise for future treatment.

Keywords: Charcot-Marie-Tooth

