



EUROPEAN MALIGNANT HYPERTHERMIA GROUP (EMHG)

<https://www.emhg.org>

European Malignant Hyperthermia Group guidelines for investigation of malignant hyperthermia susceptibility 2025

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Abstract

Since malignant hyperthermia (MH) was first described in 1960, the number of cases with fatal or serious outcomes has been markedly reduced thanks to continuous advances in knowledge about triggering, clinical course and treatment of this potentially life-threatening disorder. Another essential and constantly evolving pillar of patient safety remains diagnostics, which serves to confirm or rule out suspected cases of MH and to identify other individuals at risk of MH for prevention purposes. For more than 40 years, the British Journal of Anaesthesia has published the updated consensus diagnostic protocols of the European Malignant Hyperthermia Group (EMHG) at regular intervals. The presented diagnostic guidelines have been comprehensively revised 10 years after the last update following substantial advances in DNA-based testing methods. In addition

to the previous classification of MH susceptibility (MHS) by the *in vitro* halothane/caffeine contracture test (IVCT), a new diagnostic designation, the MH-genotype (MHG) has been introduced. The latter is reflected in the revised diagnostic pathways, which also include the adapted EMHG curation system for the classification of genetic variants with regard to their relevance to MH. In addition to minor changes in the IVCT protocol, the guidelines address updated patient referral criteria and clinical interpretation of diagnostic results. For the first time, the guidelines provide a consensus definition of a clinical MH event.