

# Idiopathic Normal Pressure Hydrocephalus Definition

Idiopathic [normal pressure hydrocephalus](#) (iNPH) (G91.2 by ICD-10), a potentially reversible cause of dementia, is the most common form of hydrocephalus in adults. iNPH is a disorder of the elderly that characteristically presents with progressive gait impairment, cognitive deficits, and urinary urgency and/or incontinence (Hakim-Adams triad - classically described by Colombian neurosurgeon Salomon Hakim and R D Adams in [1965](#)). Gait disturbance with one additional feature is essential to consider the diagnosis; however, the clinical presentation requires further supportive assessment (i.e., imaging and cerebrospinal fluid (CSF) drainage) for confirmation. Some experts have challenged the term iNPH, as the intracranial pressure is not always normal in iNPH. The term idiopathic adult hydrocephalus syndrome (iAHS) has also been proposed <sup>1)</sup>

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Idiopathic normal pressure hydrocephalus (iNPH) is a progressive [neurodegenerative disease](#) in the elderly with enlarged [ventricles](#) and normal or slightly elevated [cerebrospinal fluid pressure](#), clinically characterized by an insidious onset and gradual progression of impairments of [gait](#), [balance](#), [cognition](#), with [urinary incontinence](#) <sup>2)</sup>.

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One conventional [Idiopathic Normal Pressure Hydrocephalus Definition](#) includes this provision: "symptomatic improvement achieved by [CSF shunt placement](#)." However, since this [Idiopathic Normal Pressure Hydrocephalus outcome](#) can only be measured [postoperatively](#), the [definition](#) is unsuitable for the preoperative [Idiopathic Normal Pressure Hydrocephalus diagnosis](#). Hence, Nakajima in the 2021 guidelines refer to the description above as a "concept" rather than a definition of diagnosis per se.

The implications of using a "concept" lead to the introduction of stage-like progress in the establishment of the final diagnosis after performing shunt intervention with positive outcome. Before establishing the final diagnosis, several stages are required that will allow the selection of potential candidates for shunt treatment based on best available evidence, and these stages have been designated as [suspected](#), [possible](#), and [probable](#) (before shunt intervention) iNPH <sup>3)</sup>

<sup>1)</sup>

M Das J, Biagioni MC. Normal Pressure Hydrocephalus. 2023 Jun 26. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. PMID: 31194404.

<sup>2)</sup>

Hakim S, Adams RD. The special clinical problem of symptomatic hydrocephalus with normal cerebrospinal fluid pressure. Observations on cerebrospinal fluid hydrodynamics. J Neurol Sci. 1965 Jul-Aug;2(4):307-27. PubMed PMID: 5889177.

<sup>3)</sup>

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