

# Intracerebral Hemorrhage Mortality

**Intracerebral hemorrhage (ICH)** is associated with **high early mortality** and poor long-term outcomes, making it one of the deadliest types of stroke.

## Early Mortality

- **30-day mortality: ~35-50%**
  - Most deaths occur in the first 2 days, often due to hematoma expansion, herniation, or brainstem involvement.
- **In-hospital mortality: ~20-30%**, depending on hematoma volume, location, and patient comorbidities.
- **Higher mortality** seen in:
  - Brainstem and cerebellar hemorrhages
  - Large hematomas (>30-60 mL)
  - Intraventricular extension
  - Depressed level of consciousness at admission (GCS < 8)

## Long-Term Outcomes

- **1-year survival: ~35-40%**
- Only **10-20%** of survivors regain **functional independence** (modified Rankin Score  $\leq 2$ ).
- Risk of death remains elevated for months due to recurrent stroke, infections, and comorbid conditions.

## Predictors of Mortality

- Age > 80 years
- Low Glasgow Coma Scale at presentation
- Large hematoma volume
- Infratentorial location
- Intraventricular hemorrhage
- High blood pressure on admission
- Lack of early surgical or ICU management when indicated

## Prognostic Tools

- **ICH Score**: validated clinical tool to estimate 30-day mortality based on:
  - GCS
  - Age
  - Hematoma volume
  - Intraventricular extension
  - Infratentorial origin

## Related Sections

- [Intracerebral hemorrhage definition](#)
- [ICH Score](#)
- [Intracerebral hemorrhage management](#)

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[PM2.5 exposure](#)—particularly household-related in low SDI regions—continues to drive significant [intracerebral hemorrhage mortality](#) and morbidity despite global reductions in age-standardized rates. Disparities persist, with low SDI areas experiencing a 24.7-fold higher ASMR than high SDI regions. Projections indicate a resurgence in PM2.5-related ICH burden by 2050, emphasizing the need for tailored public health interventions targeting APMP and HAP, especially in Asia and Sub-Saharan Africa <sup>1)</sup>

<sup>1)</sup>  
Wu E, Su R, Tang T, Zhu G, Geng D. Ambient versus household PM2.5 exposure and socioeconomic disparities in intracerebral hemorrhage burden: a 32-year global analysis (1990-2021) with projections to 2050. *Front Public Health*. 2025 Jun 18;13:1615934. doi: 10.3389/fpubh.2025.1615934. PMID: 40606082; PMCID: PMC12213839.

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