Black stool (melena): When is it serious - and when do you need a gastroscopy?

Black, tarry stool is medically called **melena** and is one of the classic alarm symptoms in the gastrointestinal tract. It is most often caused by bleeding from the upper gastrointestinal tract - oesophagus, stomach or duodenum - where blood is digested by gastric acid and bacteria and turns the stool black [1]. Up to **80% of cases** are caused by a source that can be seen at gastroscopy.

Why does the stool turn black?

To produce melena, blood must have been in the gastrointestinal tract for at least **6-8 hours**, and there must be at least **50 ml of blood** [1]. Haemoglobin is converted to haematin and iron sulphide, which colours the stool shiny black and gives it a characteristic **sweetish, foul-smelling** odour.

The most common causes

Source	Frequency	Typical signs
Peptic ulcer	30-50%	Epigastric pain, Helicobacter pylori, NSAID use
Erosive gastritis	10-20%	Painkillers, alcohol, stress
Oesophageal varices	5-15%	Liver cirrhosis, concurrent **haematemesis** (vomiting blood)
Acid reflux (GERD) with oesophagitis	5-10%	Heartburn, painful swallowing
Mallory-Weiss tear	5%	After forceful vomiting
Gastric cancer	2-5%	Weight loss, loss of appetite, age >50

False melena (not bleeding) can be caused by: iron supplements, liquorice, blueberries, charcoal tablets, bismuth.

When to seek help - urgently?

Call **112 or the out-of-hours number 1813** if you have:

- Black stool + dizziness, pallor, palpitations, collapse
- Black stool + **bloody or "coffee-grounds" vomit**
- Black stool + severe abdominal pain
- Known liver cirrhosis or bleeding disorder

With clear melena accompanied by dizziness and fatigue, you should be referred acutely or subacutely to hospital - this suggests significant blood loss requiring rapid stabilisation and possible blood transfusion.

NICE CG141, recommendation 1.3.1: "Offer endoscopy to unstable patients with severe acute upper gastrointestinal bleeding immediately after resuscitation." [5]

With suspected melena without other symptoms and a stable haemoglobin (low-risk patient with a Glasgow-Blatchford score ≤1), investigation and treatment can be carried out as an outpatient at a specialist clinic with gastroscopy within 24 hours.

ESGE 2021, recommendation 1: "ESGE recommends in patients with acute upper gastrointestinal hemorrhage (UGIH) the use of the Glasgow-Blatchford Score (GBS) for pre-endoscopy risk stratification. Patients with GBS ≤1 are at very low risk of rebleeding, mortality within 30 days, or needing hospital-based intervention and can be safely managed as outpatients with outpatient endoscopy." [6]
NICE CG141, recommendation 1.1.2: "Consider early discharge for patients with a pre-endoscopy Blatchford score of 0." [5]

Black stool alone - without other symptoms - requires contact with your GP or specialist **within a few days**.

How melena is investigated

1. **History**: NSAIDs, anticoagulants, alcohol, iron supplements, previous peptic ulcer.
2. **Clinical examination**: pulse, blood pressure, need for transfusion.
3. **Blood tests**: haemoglobin, ferritin, INR, liver tests, urea (elevated in upper GI bleeding).
4. **Oral gastroscopy** - gold standard, performed within 24 hours of acute bleeding [2].
5. **Nasal gastroscopy** - a gentler alternative to oral gastroscopy, without sedation.
6. **Colonoscopy** - considered if gastroscopy fails to show a source (~5-10%).

Treatment

Acute:

- Stabilisation with fluids and possibly blood transfusion
- IV proton pump inhibitor (PPI)
- **Endoscopic haemostasis** at gastroscopy: clips, adrenaline injection, thermocoagulation [3]

- For varices: band ligation

Subacute and preventive:

- **Eradication of Helicobacter pylori** for peptic ulcer - reduces recurrence from ~60% to <10% [4]
- Stop NSAIDs, or switch to PPI-protected treatment
- Reduce alcohol
- Oncological work-up for cancer-suspect findings

Treatment at Kirurgen.dk

We offer outpatient **oral and nasal gastroscopy** under the public health insurance scheme - typically within 1-2 weeks. See also our articles on Helicobacter pylori and peptic ulcer, GERD reflux and nasal vs. oral gastroscopy.

References

1. Wilkins T, Khan N, Nabh A, Schade RR. *Diagnosis and management of upper gastrointestinal bleeding.* Am Fam Physician 2012;85(5):469-76.
2. Barkun AN, Almadi M, Kuipers EJ, et al. *Management of nonvariceal upper gastrointestinal bleeding: international consensus group.* Ann Intern Med 2019;171(11):805-22.
3. Laine L, Barkun AN, Saltzman JR, Martel M, Leontiadis GI. *ACG clinical guideline: upper gastrointestinal and ulcer bleeding.* Am J Gastroenterol 2021;116(5):899-917.
4. Ford AC, Gurusamy KS, Delaney B, Forman D, Moayyedi P. *Eradication therapy for peptic ulcer disease in Helicobacter pylori-positive people.* Cochrane Database Syst Rev 2016;(4):CD003840.
5. National Institute for Health and Care Excellence (NICE). *Acute upper gastrointestinal bleeding in over 16s: management.* Clinical Guideline CG141, 2012 (updated 2016). nice.org.uk/guidance/cg141

6. Gralnek IM, Stanley AJ, Morris AJ, et al. *Endoscopic diagnosis and management of nonvariceal upper gastrointestinal hemorrhage (NVUGIH): ESGE Guideline - Update 2021.* Endoscopy 2021;53(3):300-332.
7. Blatchford O, Murray WR, Blatchford M. *A risk score to predict need for treatment for upper-gastrointestinal haemorrhage.* Lancet 2000;356(9238):1318-21.

See also

Peptic ulcer