

# Routine preoperative tests for elective surgery

## 1. Recommendations relevant for all types of surgery

The recommendations in this NICE guideline were developed in relation to the following comorbidities: cardiovascular, diabetes, obesity, renal, and respiratory.

### Communication

- When offering tests before surgery, give people information in line with recommendations (including those on consent and capacity) made in the NICE guideline on [patient experience in adult NHS services](#)
- Ensure that the results of any preoperative tests undertaken in primary care are included when referring people for surgical consultation.

### Considering existing medicines

- Take into account any medicines people are taking when considering whether to offer any preoperative test.

### Pregnancy tests

- On the day of surgery, sensitively ask all women of childbearing potential whether there is any possibility they could be pregnant.
- Make sure women who could possibly be pregnant are aware of the risks of the anaesthetic and the procedure to the fetus.
- Document all discussions with women about whether or not to carry out a pregnancy test.
- Carry out a pregnancy test with the woman's consent if there is any doubt about whether she could be pregnant.
- Develop locally agreed protocols for checking pregnancy status before surgery.
- Make sure protocols are documented and audited and in line with statutory and professional guidance.

### Sickle cell disease or sickle cell trait tests

- Do not routinely offer testing for sickle cell disease or sickle cell trait before surgery.
- Ask the person having surgery if they or any member of their family have sickle cell disease.
- If the person is known to have sickle cell disease and has their disease managed by a specialist sickle cell service, liaise with this team before surgery.

### HbA1c testing

- Do not routinely offer HbA1c testing before surgery to people without diagnosed diabetes.
- People with diabetes who are being referred for surgical consultation from primary care should have their most recent HbA1c test results included in their referral information.
- Offer HbA1c testing to people with diabetes having surgery if they have not been tested in the last 3 months.

### Urine tests

- Do not routinely offer urine dipstick tests before surgery.
- Consider microscopy and culture of midstream urine sample before surgery if the presence of a urinary tract infection would influence the decision to operate.

### Chest X-ray

- Do not routinely offer chest X-rays before surgery.

### Echocardiography

- Do not routinely offer resting echocardiography before surgery.
- Consider resting echocardiography if the person has:
  - a heart murmur **and** any cardiac symptom (including breathlessness, pre-syncope, syncope or chest pain) **or**
  - signs or symptoms of heart failure.

Before ordering the resting echocardiogram, carry out a resting electrocardiogram (ECG) and discuss the findings with an anaesthetist.

## 2. Recommendations for specific surgery and ASA grades: colour traffic light tables

ASA Grades (American Society of Anesthesiologists Physical Status Classification System)	
ASA 1	A normal healthy patient
ASA 2	A patient with mild systemic disease
ASA 3	A patient with severe systemic disease
ASA 4	A patient with severe systemic disease that is a constant threat to life

Test	ASA 1	ASA 2	ASA 3 or ASA 4
<b>Minor surgery (examples: excising skin lesion; draining breast abscess)</b>			
Full blood count	Not routinely	Not routinely	Not routinely
Haemostasis	Not routinely	Not routinely	Not routinely
Kidney function	Not routinely	Not routinely	Consider in people at risk of AKI <sup>1</sup>
ECG	Not routinely	Not routinely	Consider if no ECG results available from past 12 months
Lung function/arterial blood gas	Not routinely	Not routinely	Not routinely
<b>Intermediate surgery (examples: primary repair of inguinal hernia; excising varicose veins in the leg; tonsillectomy or adenotonsillectomy; knee arthroscopy)</b>			
Full blood count	Not routinely	Not routinely	Consider for people with cardiovascular or renal disease if any symptoms not recently investigated
Haemostasis	Not routinely	Not routinely	Consider in people with chronic liver disease <ul style="list-style-type: none"> <li>• If people taking anticoagulants need modification of their treatment regimen, make an individualised plan in line with local guidance</li> <li>• If clotting status needs to be tested before surgery (depending on local guidance) use point-of-care testing<sup>2</sup></li> </ul>
Kidney function	Not routinely	Consider in people at risk of AKI <sup>1</sup>	Yes
ECG	Not routinely	Consider for people with cardiovascular, renal or diabetes comorbidities	Yes
Lung function/arterial blood gas	Not routinely	Not routinely	Consider seeking advice from a senior anaesthetist as soon as possible after assessment for people who are ASA grade 3 or 4 due to known or suspected respiratory disease
<b>Major or complex surgery (examples: total abdominal hysterectomy; endoscopic resection of prostate; lumbar discectomy; thyroidectomy; total joint replacement; lung operations; colonic resection; radical neck dissection)</b>			
Full blood count	Yes	Yes	Yes
Haemostasis	Not routinely	Not routinely	Consider in people with chronic liver disease <ul style="list-style-type: none"> <li>• If people taking anticoagulants need modification of their treatment regimen, make an individualised plan in line with local guidance</li> <li>• If clotting status needs to be tested before surgery (depending on local guidance) use point of care testing<sup>2</sup></li> </ul>
Kidney function	Consider in people at risk of AKI <sup>1</sup>	Yes	Yes
ECG	Consider for people aged over 65 if no ECG results available from past 12 months	Yes	Yes
Lung function/arterial blood gas	Not routinely	Not routinely	Consider seeking advice from a senior anaesthetist as soon as possible after assessment for people who are ASA grade 3 or 4 due to known or suspected respiratory disease
<p>AKI, acute kidney injury  <sup>1</sup>See recommendation 1.1.8 of the NICE guideline on <a href="#">acute kidney injury</a>  <sup>2</sup>Note that currently the effects of direct oral anticoagulants (DOACs) cannot be measured by routine testing.</p>			