

This section outlines the common drugs currently available for administration by Ambulance Clinicians (*refer to specific drug protocols*).

Legal Considerations

Drugs administered by Ambulance Clinicians fall into two categories:

1. non-prescription drugs such as aspirin
2. drugs under the Medicines Act 1968¹ designated prescription-only medicines (POMs). Under normal circumstances, POMs can only be prescribed by a qualified Doctor (or dentist) but exemptions exist under Part III of Schedule 5 to the Prescription Only Medicines (Human Use) Order 1997 which allow suitably trained ambulance Paramedics to administer these drugs in specified circumstances. For the purposes of this order a Paramedic is defined as being on the register of Paramedics maintained by the Health Professions Council pursuant to paragraph 11 of Schedule 2 to the Health Professions Order 2001.

Safety Aspects

Always check drugs to ensure the correctness of:

- type
- strength
- packaging intact
- clarity of fluid
- expiry date.

Drug Documentation

The following should be noted:

- avoid unnecessary use of decimal points, e.g. 3mg, not 3.0mg
- quantities of 1 gram or more should be written as 1g etc.,
- quantities less than 1 gram should be written in milligrams, e.g. 500mg, not 0.5g
- quantities less than 1mg should be written in micrograms, e.g. 100 micrograms, not 0.1mg
- when decimals are unavoidable a zero should be written in front of the decimal point where there is no other figure, e.g. 0.5mL, not .5mL
- use of the decimal point is acceptable to express a range, e.g. 0.5 to 1g
- 'micrograms' and 'nanograms' should not be abbreviated nor should 'units'
- in medicine and pharmacy the term 'millilitre' (ml or mL) is used; cubic centimetre, c.c., or cm³ should not be used.

Drug Prescribing Terms

In the case of prescription medicines, a variety of abbreviations are used, some of which are described **Appendix 1**.

NOTE: Internationally recognised units and symbols are used where possible.

DRUG ROUTES

There are a number of drug routes that appropriately trained ambulance personnel can use to administer drugs. These are divided into parenteral routes (*see Table 1*), which require a physical breach of the skin or mucous membrane (e.g. by injection) and non-parenteral routes (*see Table 2*) (i.e. absorbed passively via the gastrointestinal tract, mucous membranes or skin).

Table 1 – Parenteral Routes

Intramuscular (IM)	Injection of the drug into muscle, which is then absorbed into the blood. Absorption may be decreased in poor perfusion states.
Intra-osseous (IO)	A rigid needle inserted directly into the bone marrow. Resuscitation drugs and fluid replacement may be administered by this route. Absorption is as quick as by the intravenous route.
Intravenous (IV)	Direct introduction of the drug into the cardiovascular system that normally delivers the drug to the target organs very quickly.
Subcutaneous (SC)	Injection of the drug into subcutaneous tissue. This has a slower rate of absorption than from IM injection.

Table 2 – Non-Parenteral Routes

Endotracheal (ET)	Facilitates the rapid absorption of drugs from the bronchial tree when administered through an ET tube. Often used as a secondary route in cardiac arrest patients when IV access has not been established. Drug doses must be doubled and the drug “blown down” to maximise effectiveness. Absorption is variable.
Inhaled (INH)	Gaseous drugs that are absorbed via the lungs.
Nebulisation (Neb)	Liquid drugs agitated in a stream of oxygen create fine droplets that are absorbed rapidly from the lungs.
Oral	Drug is swallowed and is absorbed into the blood from the gut. Effects usually start 30–40 minutes after administration. In serious trauma or illness, absorption may be delayed.
Rectal	Drug is absorbed from the wall of the rectum. This route is used for patients who are having seizures and who cannot be cannulated without risk to themselves or ambulance personnel. Effects usually occur 5–15 minutes after administration.
Sublingual	Tablet or aerosol spray is absorbed from the mucous membrane beneath the tongue. Effects usually occur within 2–3 minutes.
Transdermal (TD)	Absorption of a drug through the skin.

REFERENCES

- ¹ HM Government. The Medicines Act 1968 (Commencement No. 8) Order 1989 Statutory Instrument 1989 No. 192 (C. 6) London: HMSO. Available from: http://www.opsi.gov.uk/si/si1989/Uksi_19890192_en_1.htm.
- ² HM Government. The Prescription Only Medicines (Human Use) Amendment Order 2003. Statutory Instrument 2003 No. 696: London: HMSO. Available from: <http://www.opsi.gov.uk/si/si2003/20030696.htm>
- ³ Joint Formulary Committee, editor. *British National Formulary*. 50th ed. London: British Medical Association and Royal Pharmaceutical Society of Great Britain, 2005.

APPENDIX 1 – Some common abbreviations⁴

ac	ante cibum (before food)
approx	approximately
bd	twice daily
CD	preparation subject to prescription requirements under The Misuse of Drugs Act
ec	enteric-coated (termed gastro-resistant in BP)
f/c	film-coated
IM	intramuscular
IV	intravenous
m/r	modified-release
MAOIs	monoamine-oxidase inhibitors
max	maximum
MR	modified release
NSAID	non-steroidal anti-inflammatory drug
o. d	omni die (every day)
o. m	omni mane (every morning)
o. n	omni nocte (every night)
p. c	post cibum (after food)
PGD	patient group direction
POM	prescription only medicine
pr	per rectum (rectally)
prn	when required
q.d.s	quater die sumendus (to be taken four times daily)
q.q.h	quarta quaque hora (every four hours)
s/c	sugar-coated
SOS	when required
SR	slow release
stat	immediately
t.d.s	ter die sumendus (to be taken three times daily)
t.i.d	ter in die (three times daily)
top	topical