

Adrenaline in Emergency Drug Kits for the treatment of Anaphylaxis

The appropriate treatment of anaphylaxis is detailed in:

- Resuscitation Council (UK) Guidelines: <https://www.resus.org.uk/anaphylaxis/emergency-treatment-of-anaphylactic-reactions/>
- The British National Formulary: <https://bnfc.nice.org.uk/drug/adrenalineepinephrine.html>

Drug Prescribing for Dentistry SDCEP Page 10: <https://www.sdcep.org.uk/published-guidance/drug-prescribing/>

Ampoules

It is a requirement that all dental practices **must stock adrenaline ampoules** in the practice emergency drug kit for the treatment of anaphylaxis. Stock should be in the form and strength outlined in the dental section of the BNF¹ i.e. adrenaline 1:1000 x 1ml ampoules. Both the Resuscitation Council² and the BNF¹ recommend that adrenaline ampoules are stocked. The doses required for various age groups are noted in Table 1. Sufficient stock should be kept to allow for a second dose where there is no response by the patient to the initial dose. Dentists should ensure that they are confident in using adrenaline ampoules as part of their training in medical emergencies.

Table1 – BNF¹ recommended doses of IM Adrenaline for the treatment of anaphylaxis

<i>Age</i>	<i>Dose Required</i>
Adult	500 micrograms
Child over 12 years	500 micrograms
Child 6 to 12 years	300 micrograms
child aged 6 months to 6 years	150 micrograms

Pre –Filled Syringe (PFS)

This administration device for adrenaline is a recent addition to critical care medicine and may be considered for inclusion in dental practice emergency drug kits after appropriate advice and training in medical emergencies. The advantages of pre-filled syringes are:

- The dose is pre-measured
- Administration time is quicker
- Reduces the risk of operator injury when opening glass ampoules

Syringes should be ordered and stocked only after consulting Table 1 above for the doses recommended in the BNF. Refer to the SDCEP guidance for further advice on the use of pre-filled syringes.

Auto-injector (AI)

Adrenaline auto-injectors are available but they are intended for **SELF-ADMINISTRATION** by patients experiencing an anaphylactic reaction.

If dentists decide to keep adrenaline auto-injectors alongside the recommended adrenaline ampoules, they should ensure that they stock the correct strengths to cover doses noted in Table 1.

It is important to note that a variety of auto-injectors are available some of which deliver doses of adrenaline not recommended in the BNF. Information on the various products is noted in Table 2 below.

Table 2

	Adult /Child over 12 years	Child 6-12 years	Child under 6 years
BNF ¹ Recommended dose	500 micrograms	300 micrograms	150 micrograms
Jext [®] /EpiPen [®] Dose delivered	1 x300 micrograms	1 x300 micrograms	1 x150 micrograms
Emerade [®] Dose delivered	1 x500 micrograms	1 x300 micrograms	1 x150 micrograms

The Scottish Dental Clinical Effectiveness Programme (SDCEP) guidance 'Drug Prescribing For Dentistry' is endorsed by the Department of Health and provides useful advice on the management of medical emergencies and is available at the link below:

<https://www.sdcep.org.uk/published-guidance/drug-prescribing/>

Practices may wish to seek further advice from their indemnifiers in relation to the use of adrenaline in medical emergencies.

1. British National Formulary 74 September 2017 to March 2018 p30, p216
2. Resuscitation Council (UK) – resuscitation guidelines 2015

