

Introduction

HIV infection can be contracted through significant exposure to body fluids containing HIV. The risk is small— about 1:300 for an inoculation injury from a hypodermic needle or c. 1:1000 for a splash onto a mucous membrane. Exposure to blood from an HIV patient where the viral load is effectively suppressed (<200 copies HIV RNA/ml) poses no significant risk of infection

Prompt treatment with anti-viral drugs can reduce the risk of contracting HIV. Treatment should begin as quickly as possible after an exposure for maximum effect. Treatment has to be taken for 28 days. Side-effects during treatment are common, although dangerous side effects are rare.

Your need therefore to be able to rapidly assess after an accident whether this has put you at risk of infection and start treatment if risk is calculated to be significant.

First action

The first action after an exposure is first aid: wash any wound with clean water. This will help encourage bleeding which may wash out virus present in a wound.

Do not scrub a wound. Over-vigorous cleaning can damage tissue and increase the risk of infection.

Assessing your risk

Wherever possible, ask a qualified colleague to carry out your risk assessment and to manage your treatment, if treatment is indicated.

If your host hospital has its own emergency protocol for assessing and treating significant HIV exposures you should follow this. It will be attuned to local risk factors and circumstances.

If you need to carry out your own assessment, there are **two steps** to this:

1) Assess whether or not the exposure was significant.

A **significant exposure** is one where the material involved is one that could contain HIV or other blood-borne virus (Hepatitis B, Hepatitis C) **and** it could have got inside your body.

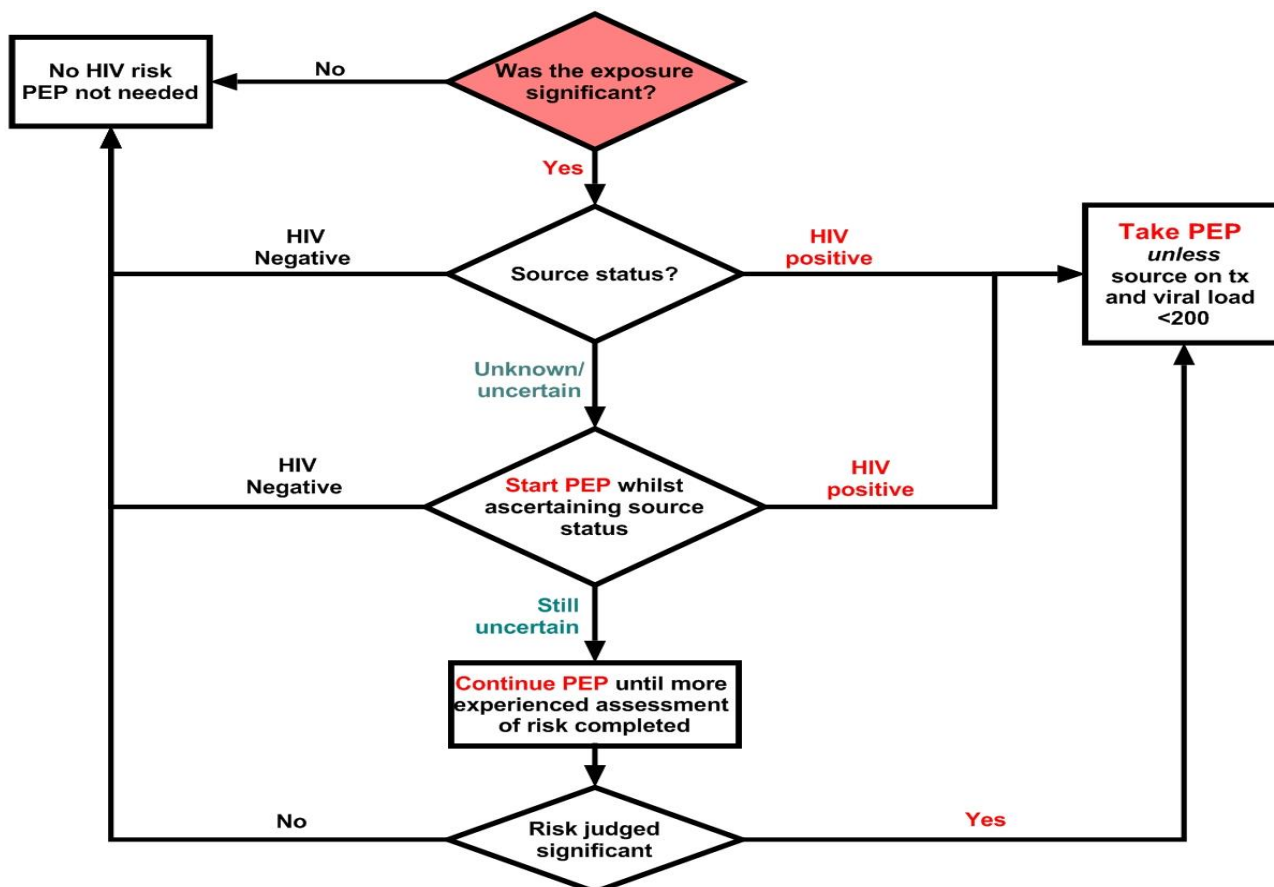
a) Is the material you have been exposed to dangerous?

- i) **Blood, serum, semen, exudates or any fluid from a body cavity pose risk:** they may contain HIV or other blood borne viruses
- ii) **Saliva, sweat, urine & faeces pose NO risk,** unless *visibly* blood-stained

b) Could the material have got into your body?

- i) Any puncture wound *or* cut or scratch sufficient to draw blood *or* bite that breaks skin is **significant**
- ii) A splash of blood or other 'risk' fluid into your mouth, nose or eye is **significant**
- iii) Contamination of broken skin e.g. fissured eczema or a recent cut or abrasion that has not yet formed a scab is **significant**
- iv) Contamination of intact skin by blood or other body fluids is **NOT significant**

2) Use the flow chart to determine whether or not to take HIVPEP



Notes

- Obtaining consent to test for HIV status:** As in the UK, patients can only be tested for HIV status, or other infection, with informed consent, obtained without coercion. Ethically, you should never be the person who seeks consent. Consent is best obtained by health professional fluent in the patient’s first language and with knowledge of local cultural sensitivities. Ask one of your hosts to obtain consent
- Validity of old test results.** A negative HIV test result only reflects the person’s status at the time the person was tested. When deciding whether or not a test result may still be valid, consider the patients risk factors: if their risk is predominantly of contracting HIV is via sexual transmission, how likely is it that they will have been sexually active between the date they were last tested, and the date of the exposure?
- Bedside test kits:** Point-of-care test kits that detect P24 antigen as well as HIV antibody [4th generation tests] are now in common use in many countries. They are as sensitive as laboratory tests.
- Source status unknown:** Standard advice in the UK is to not recommend HIVPEP if the status of the source is unknown. In high prevalence countries the risk will be higher. Unofficial expert guidance given to the College OH service is that, if the local HIV prevalence is more than 10 per cent, or the source is known to be from a risk group at enhanced risk of contracting HIV¹, PEP is recommended for a significant exposure
- Uncertainty:** If you have had a significant exposure and remain unsure after following the guidance given here, take HIV PEP until you can obtain expert help and advice from a qualified doctor.

¹ **HIV Risk factors:** Sex worker, sexual partner of a patient with HIV, man who has sex with men, IV drug user, parent of young child with HIV

Using HIV PEP

The drugs prescribed are **Truvada**™— tenofovir disoproxil 245mg (as fumarate) *plus* emtricitabine 200mg, both reverse transcriptase inhibitors and **Raltegravir** 400mg, an integrase inhibitor

Dosage: Take 1 Raltegravir tablet twice per day (every twelve hours) plus 1 tablet Truvada daily. Treatment should start as soon as possible after exposure. Once started on treatment, take doses with food: this will even out absorption and blood levels and reduce the incidence of side effects.

Follow on treatment: A full HIVPEP course lasts for 28 days. You need to obtain another 23 days' supply. You will have 5 ½ days to arrange for a local doctor to supply or prescribe this for you. You do not need to continue with the exact same drugs as originally prescribed: any of the standard HAART regimes used for treating established HIV disease will be effective. In many countries, suitable regimes are provided in fixed dose combination in a single tablet.

If you need help locating a doctor able to prescribe for you, you can get contact information for a local qualified, English-speaking doctor in the country via the College Insurers helpline: +44 (0) 20 7173 7797 or the UK High Commission for the country. See www.ukinCOUNTRY.fco.gov.uk for information.

Contra-indications

Renal, liver disease: the doses used may need to be adjusted: seek expert advice before continuing beyond starter pack.

Pregnancy: HIVPEP treatments have not been fully evaluated in pregnancy but are widely used to prevent HIV transmission. Start taking PEP if indicated but seek expert advice as soon as possible on the most appropriate management for the remainder of the treatment period

Interactions with commonly used drugs

Tenofovir: Avoid concomitant use of NSAIDs, aspirin, other antivirals.

Raltegravir: Avoid concomitant use of vitamins & nutritional supplements or calcium. Do not take any antacid in the 4 hours prior to a dose: it may reduce absorption of Raltegravir.

Seek experienced advice if you need to take any the above medicines with your HIVPEP .

If you are taking any medication not declared when you were prescribed HIVPEP, or you change to a different HIVPEP treatment, check for drug interactions with an experienced doctor or the <http://www.hiv-druginteractions.org/> web page.

Missed doses

If you miss a dose take it as soon as remembered unless it is close to the time of your next dose, in which case, just wait until your next dose is due. Do not take a double dose.

Managing side effects

Nuisance side effects occur quite commonly in people taking HIVPEP. Headache, stomach upsets, malaise, tiredness & insomnia are most common. Symptoms may settle after the first few days. Serious side effects are rare, but lactic acidosis has been reported.

Most common adverse effects, if troublesome, can be treated with non-prescription medicines— e.g. paracetamol for headache, loperamide for diarrhoea. Avoid using NSAIDs during treatment. For other nuisance effects, you may need to slow down or rest for some days to cope with them— ambitious travel plans may have to be reconsidered.

If you develop severe abdominal pains, or a widespread rash, or become systemically unwell consult with a qualified doctor urgently: these could be indicators of dangerous side effects. Report flu like symptoms occurring anytime up to 12 weeks after starting treatment: they could conceivably be signs of a sero-conversion illness.

If nuisance side effects remain troublesome changing to a different HIVPEP regime may help.

Storage & transport of HIVPEP drugs

Avoid extremes of heat. The tablets should be stored in their original packaging, away from direct sunlight and kept discretely and securely: there is a real risk of them being stolen. Pack them in the centre of your luggage to protect against radiant heat. Take a copy of your prescription with you as evidence that the tablets are legally prescribed medicines. If it will take you more than half an hour to reach your accommodation, keep your starter pack at the hospital or carry them on you.

Other precautions

If you have sex during the follow-up period, you must use condoms, in addition to any other contraception during the time you are taking treatment and until you have completed follow-up in the UK to determine whether you have been infected. Kaletra will reduce the effectiveness of oral contraceptives.

Medical management

If you have concerns over how an exposure is being managed, you can contact the College OH Service for advice: phone +44 (0) 20 7594 9401 during UK Office hours, or email occhealth@imperial.ac.uk, giving details of your situation and how to contact you by phone.

On return

Report all significant exposures to the College OH Service, even if you did not need to take HIVPEP. You may need followed up to check for other blood-borne infections such as Hepatitis C

Dr. Anna Stern, Occupational Physician January 2018