

(HIV) Post Exposure Prophylaxis (PEP) Supporting Guidelines

**Directorate/Department: Raigmore Emergency
Department and Other HIV PEP Holding Centres
(excluding Argyll and Bute)**

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HIV post exposure prophylaxis Guideline

Contents

PEP risk assessment <i>following sexual, occupational or other exposure</i>	Pages 3-4
Guideline <i>for early management of exposure to blood or bodily fluids</i>	Pages 5-6

Appendices

1. PEP register <i>example used in Emergency Department</i>	Page 7
2. Urgent referral form <i>if referring to Highland Sexual Health</i>	Page 8
3. PEP medication pack patient information <i>to further guide consultation if PEP is being considered</i>	Page 9
4. PEP drug information <i>(also kept with the PEP medication pack)</i>	Page 10
5. Advice for reducing sexual transmission of HIV and other infections	Page 11

Risk assessment for HIV Post Exposure Prophylaxis (PEP) following sexual, occupational or other exposure

Did exposure occur ≤ 72 hrs ago?

[PEP can be given up to 72hrs post exposure but **should be started ASAP**, ideally within 24hrs]

No

PEP NOT recommended
(see overleaf)

Yes

Risk of HIV transmission = Risk that source has HIV with detectable virus x Risk per exposure.

Assess risk of SOURCE having HIV viraemia¹

Known to be HIV positive with detectable virus**	100%
Men who have sex with men (MSM)- London	3.2%
- rest of UK	2%
IVDU (UK)	0.7%
Heterosexual male/female	- Black African ethnicity M 0.7%, F 0.9%
	- Non Black African ethnicity M 0.02%, F 0.01%
Known HIV positive with confirmed undetectable viral load*	0%

For country specific prevalence data go to [www.aidsinfo.unaids.org] and select the relevant population group (left hand column) e.g. people who inject drugs (PWID) then select HIV prevalence among PWID. Hover over relevant country on the map.

NB high prevalence is considered to be >1%

For current UK prevalence go to www.gov.uk HIV in the UK [year] report

** If on treatment ascertain drugs and latest viral load (if known).

Assess risk of EXPOSURE*

Rape (male or female)	Not quantified
Receptive anal intercourse (overall)	1 in 90 (1.1%)
with ejaculation	1 in 65 (1.5%)
no ejaculation	1 in 170 (0.6%)
Insertive anal intercourse (overall)	1 in 666 (0.15%)
not circumcised	1 in 161 (0.62%)
circumcised	1 in 909 (0.11%)
Receptive vaginal intercourse	1 in 1000 (0.1%)
Insertive vaginal intercourse	1 in 1219 (0.08%)
Semen splash in eye	< 1 in 10,000 (<0.01%)
Receptive oral sex (giving fellatio)	< 1 in 10,000 (<0.01%)
Insertive oral sex (receiving fellatio)	< 1 in 10,000 (<0.01%)
Blood transfusion*	1 in 1 (100%)
Needlestick	1 in 333 (0.3%)
Sharing injecting equipment*	1 in 149 (0.67%)
Human bite	< 1 in 10,000 (<0.01%)

Calculating risk of HIV TRANSMISSION [fractioncalculator.com]

HIV transmission risk (per exposure) is =

Risk that source has HIV with detectable virus x Risk per exposure

Note: For multiple exposures calculate a cumulative risk.

If source unknown - proactively attempt to establish HIV status of source.

Worked examples:

Patient has unprotected receptive anal sex with homosexual male from London

Risk of HIV = **1.1%** x **3.2%** = 0.035% ≈ 1 in 3,000 = moderate risk

Patient has a needle stick from IVDU of unknown HIV status:

Risk of HIV = **0.3%** x **0.7%** = 0.002% ≈ 1 in 50,000 = low risk

Prescribing recommendations¹ [NB PEP NOT a Rx for Anxiety re HIV*]

'Recommended': Benefits of PEP outweigh risks (e.g. risk >1 in 1000)

'Consider': Low risk of HIV transmission, benefit of PEP less clear. Other circumstances such as local prevalence/outbreak and extenuating factors such as mucosal barrier breach, other STI, multiple risks (e.g. Risk between 1/1000 - 1/10,000)

'Generally not recommended': Risk of HIV very low (e.g. Risk between 1/1000 - 1/10,000), benefits of PEP less likely to outweigh risks unless clear extenuating factor as outlined under "consider". **[*NB 'all clear' bloods effectively available 1/12 earlier if PEP not given]**

'NOT recommended': Risk of HIV negligible. PEP should not be given (e.g. risk <1/10,000)

	Index HIV positive		Index of unknown HIV status	
	HIV VL unknown or detectable	HIV VL undetectable	From high prevalence country / risk-group (e.g. MSM) *	From low prevalence country / group
SEXUAL EXPOSURES				
Receptive anal sex	Recommend	Not recommended ^b <small>Provided on ART ≥6 months with undetectable HIV VL within the last 6 months & good adherence</small>	Recommend	Not recommended
Insertive anal sex	Recommend	Not recommended	Consider ^{c,d}	Not recommended
Receptive vaginal sex	Recommend	Not recommended	Generally not recommended ^{e,d}	Not recommended
Insertive vaginal sex	Consider ^e	Not recommended	Not recommended	Not recommended
Fellatio with ejaculation	Not recommended	Not recommended	Not recommended	Not recommended
Fellatio without ejaculation	Not recommended	Not recommended	Not recommended	Not recommended
Splash of semen into eye	Not recommended	Not recommended	Not recommended	Not recommended
Cunnilingus	Not recommended	Not recommended	Not recommended	Not recommended
OCCUPATIONAL AND OTHER EXPOSURES				
Sharing of injecting equipment	Recommended	Not recommended	Generally not recommended ^a	Not recommended
Sharps injury	Recommended	Not recommended	Generally not recommended ^{e,f}	Not recommended
Mucosal splash injury	Recommended	Not recommended	Generally not recommended ^e	Not recommended
Human bite	Generally not recommended ^g	Not recommended	Not recommended	Not recommended
Needlestick from a discarded needle in the community			Not recommended	Not recommended

¹Taken from BASHH PEP guideline 2021: <https://www.bashhguidelines.org/media/1269/pep-2021.pdf>

ALL PATIENTS

- Discuss other issues (viral hepatitis, contraception, sexual assault, tetanus booster, antibiotics, etc as appropriate)
- Record discussion / advice
- Enter data into **ED HIV PEP Register** (Held with 'Starter Pack of PEP) for **all** consultations relating to PEP - **whether given or not**

Following SEXUAL EXPOSURE whether or not PEP given

- Counsel safer sex (abstinence or barrier methods) until further advised by 'Highland Sexual Health' (HSH).
- Complete **'Urgent PEP Referral Sheet'** to HSH for follow up of HIV PEP, STI screening, contraception (Appendix 2)
- Email 'Urgent PEP Referral Sheet' to HSH at nhsh.hsh-healthadvisor@nhs.scot. Keep original with Raigmore ED notes (or equivalent if seen in another setting).
- Patients should be advised to expect a call from HSH **but to contact them themselves (Tel: 01463 70 4202) if nothing heard after one full working day**

Following OCCUPATIONAL EXPOSURE if PEP NOT given and NOT RECOMMENDED

- Reassurance of low risk
- Serum save [request to virology for BBV serum save]
- Refer to NHS Occupational Health if NHS staff member or GP if not, for follow up bloods at 3 months and complete hepatitis B vaccinations if indicated.

For patients given PEP

Find PEP 'Starter pack' In local ED / HIV PEP Holding centre (in Raigmore this is ED Duty Room drug cupboard) with **Memorandum: HIV PEP 'Starter Pack'** attached. Open outer packaging to access drugs and paperwork. For consultation guidance specifically look for the envelope containing:

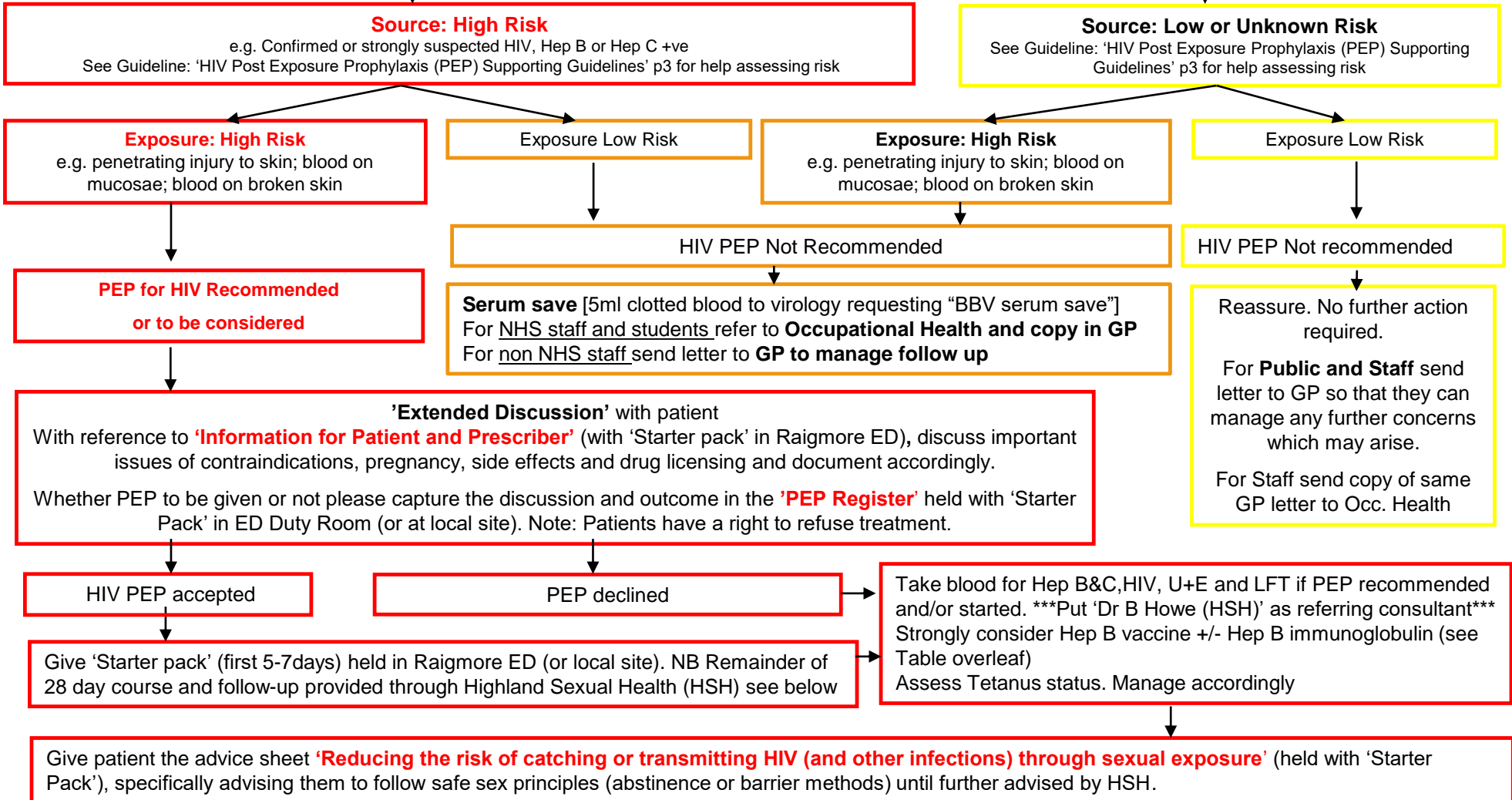
- 3x copy of **'HIV Post Exposure Prophylaxis: Information for patient and Provider'** for signing (1 for patient, 1 for notes, 1 for Occ Health if NHS Staff)
- 1x copy of **'Advice for reducing the risk of catching or transmitting HIV through sexual exposure'**
- Advise the patient that although these drugs are not specifically licensed for this use they are recommended for this use by the Chief Medical Officer.
- Counsel the patient regarding the importance of adhering to treatment and also side effects of treatment.
- Dispense Starter pack of drugs (May be a 5 or a 7 day supply)
- Inform patient that rest of full course (28 days) is provided through HSH, as arranged above
- Complete **'Urgent PEP Referral Sheet'** to HSH for follow up of HIV PEP (Appendix 2)
- Consider suggesting that first dose is taken in the Department**
- Inform ED Co-ordinator that the package has been opened / used so that the pack (drugs and information sheets) can be resupplied

Guideline for the early management of exposure to blood or body fluids*

* NHS staff and students should only come to ED if Occupational Health unavailable

Basic First Aid – Immediate: promote bleeding if small wound then gently wash with soap and water (irrigate mucous membranes with water). Do NOT scrub or suck area.

Consider **type of exposure** and **infectivity of source**. If source is known (e.g. hospital patient) recommend **testing of 'Source'** with informed consent (see page 4) [5ml clotted blood sent **urgently** to Virology for HIV, Hep B&C testing]. With consent of Source advise that results sent to a) the 'Source' AND b) Occupational Health (if exposed patient is NHS Staff) OR c) Exposed patient's GP (if exposed patient is not NHS Staff)



For ALL patients recommended and/or given PEP, email completed '[Urgent PEP referral sheet](#)' (see p8) to nhsh.hsh-healthadvisor@nhs.scot
Also advise them to contact HSH (Tel: 01463 704202) if they have not heard back from them within 1 working day. (For NHS staff send copy of the same emailed HSH referral to Occ Health). All staff (whether given PEP or not) should be advised to contact Occ Health ASAP to arrange review. For Non-Staff ensure appropriate information re attendance and outcome passed to GP (e.g. GP letter in EDIS)

Table¹: Guidance on giving Hep B vaccine and/or Hep B Immunoglobulin (HBIG) following reported exposure incidents

Hep B status of person prior to exposure	Significant exposure			Non-significant exposure	
	HBsAg positive source	Unknown source	HBsAg negative source	Continued risk	No further risk
Unvaccinated	Accelerated course* of Hep B vaccine plus HBIG with first dose	Accelerated course* of Hep B vaccine*	Consider course of Hep B vaccine	Initiate course of Hep B vaccine	No HBV prophylaxis. Reassure
Partially vaccinated	One dose of Hep B vaccine and finish course	One dose of Hep B vaccine and finish course	Complete course of Hep B vaccine	Complete course of Hep B vaccine	Complete course of Hep B vaccine
Fully vaccinated with primary course	Booster dose of Hep B vaccine if last does ≥ 1yr ago	Consider booster dose of Hep B vaccine if last does ≥ 1yr ago	No NBV prophylaxis. Reassure	No NBV prophylaxis. Reassure	No NBV prophylaxis. Reassure
Known non-responder to Hep B vaccine (anti-Hep Bs<10mIU/ml 1-2 months post immunisation)	HBIG Booster dose of Hep B vaccine. A second dose of HBIG should be given at one month	HBIG Consider booster dose of Hep B vaccine. A second dose of HBIG should be given at one month	No HBIG Consider booster dose of Hep B vaccine.	No HBIG Consider booster dose of Hep B vaccine	No NBV prophylaxis. Reassure

Hep B vaccine should ideally be given within 24hrs of exposure but should still be considered up to a week after exposure.

*The **accelerated course of vaccine** consists of doses spaced at **zero, one and two months**. A subsequent booster dose at 12 months is only required if they remain at continued high risk. [For adults >18 at immediate risk, a very rapid course of vaccinations given at days 0,7 and 21 with a booster at 12 months is an alternative].

Advice regarding Informed Consent for testing 'Source' patient:

Where the 'Source' is a hospital patient the responsibility for testing them lies with the team they are under. Informed consent will be required. This conversation should be held **between the Source patient and a (third party)** i.e. NOT the person who sustained the needle stick injury). Suggested elements of the conversation with any Source patient include:

"An incident has occurred where another person may well have been contaminated with some of your blood (or body fluid). To help decide what, if any, treatment we need to offer that person it would be extremely helpful if we can test your blood – specifically for HIV, Hep B and Hep C. Are you happy enough to allow us to do that?"

"You can expect to get a copy of the result but in order to act on it for the sake of the other affected person we will need to inform the Occupational Health Service and / or their GP. Are you happy to allow us to do that?"

"If the result is negative it will not affect you. If however, we find you are positive for one or more of the above infections you have the advantage of knowing that appropriate treatment and advice can be provided much sooner than it otherwise would have been if this result had remained unknown"

Note 1: It should be made clear that routine testing such as this will be seen as non-discriminatory and that the decision to have the sample taken rests entirely with the 'Source' patient¹

Note 2: Where a Source patient is under a General Anaesthetic ('GA') testing will have to wait until the patient is fully conscious and can give informed consent. If in the meantime the exposure risk and likely infectivity of the Source is deemed sufficiently high the decision to give HIV PEP or not will need to be made without the benefit of a result.

Note 3: Other than when under GA, where a Source patient lacks capacity to give informed consent their next of kin may be approached to help with the decision to test their blood.

1. The Green Book on immunisations, Chapter 18, Hepatitis B (2019). Available at: [<https://www.gov.uk/government/publications/hepatitis-b-the-green-book-chapter-18>]

URGENT PEP REFERRAL SHEET

To Highland Sexual health for Follow Up of HIV Post Exposure Prophylaxis after Sexual Exposure (PEPSE) or Needlestick (or Similar) Exposure (PEP)

For a printable version of this form please copy the link below and paste it into the address line

(NB may work better in 'MS Edge' or 'Chrome' browser rather than internet explorer):

<https://patientinfo.nhshighland.scot.nhs.uk/Sexual%20Health/URGENT%20PEP%20REFERRAL%20SHEET.docx>

NOTE: Urgent Referral should be emailed to:

nhsh.hsh-healthadvisor@nhs.scot

APPENDIX 3

Memorandum: HIV Post Exposure Prophylaxis 'Starter Pack' THIS INFO ALSO AVAILABLE IN TAMS

Please note this pack should contain:

- 2x Drugs (see below)

The full course is 28 days. This 'Starter Pack' covers the first 5 days (sometimes 7 days) of treatment with the remainder being provided through Highland Sexual Health as necessary.

- 3 x copies of Drug Information Sheet re Emtricitabine/ Tenofovir disoproxil and Raltegravir used as HIV PEP – to be signed. (One for patient, one for ED notes (or local equivalent)), one for Occupational Health (where relevant)

These are designed to be used to inform the consultation between Prescriber and Patient and ultimately require signatures as part of the prescribing and recording process.

- 1 x copy Advice sheet 'Reducing the risk of catching or transmitting HIV (and other infections) through sexual exposure'

In addition to the Drug Information Sheet mentioned above standard drug information leaflets are contained within the corresponding drug packaging

- Raltegravir + Emtricitabine/ tenofovir disoproxil– anti-retroviral drugs for treating HIV

PLEASE FILL IN THE DETAILS ON THE LABEL ON THE FRONT OF EACH OF THE DRUG PACKS BEFORE HANDING TO THE PATIENT!

HIV Post-exposure Prophylaxis
Information for Patient and Prescriber

Drug Information – Emtricitabine/ Tenofovir disoproxil & Raltegravir

Introduction

You have either been prescribed, or are being considered for a prescription of what is known as, HIV post-exposure prophylaxis (i.e. preventative treatment)* or 'PEP' because of the possibility that you have been exposed to the HIV virus either through sexual exposure; a needle stick injury; or other similar exposure event.

The aim of this treatment is to reduce the likelihood of you developing HIV infection following a potential exposure. It is only effective if started within 72 hours of exposure event, and is more effective the sooner it is given. So the medication should be taken as soon as possible after the potential exposure. There is some important information about this treatment that you should be aware of when deciding whether to take it or not.

The Treatment

The medication are specific anti- HIV drugs. They are not specifically licensed for HIV prevention (PEP) however they are recommended in national guidance for this use. Signing at the bottom of this form indicates that you understand and accepted this.

The anti-viral treatment consists of a course of two tablets (see below) although there are three drugs in total:

Emtricitabine/tenofovir disoproxil tablets – one tablet contains emtricitabine 200mg and tenofovir disoproxil 245mg

Raltegravir tablets – one tablet contains raltegravir 400mg (the total dose may soon be changed to 2 x 600mg tablets taken once daily)

Typically you will be supplied with a 5 or 7 day 'starter' pack, but the full course is 28 days. Arrangements will be made with **Highland Sexual Health Clinic (HSH) at Raigmore Hospital (tel. 01463 704202 – office hours)** for follow-up and to obtain the remainder of the course of treatment, as necessary. If you do not hear from HSH after 1 working day please contact them directly on the number above.

You need to complete the 28 day course to get maximum benefit so please do not stop taking the pills without speaking to a doctor.

If you take other medicines and / or have another medical problem

With this treatment there is a risk of problems developing if you are taking other medication (including herbal medicines) or if you have other medical problems (e.g. kidney or liver problems). Emtricitabine/tenofovir disoproxil specifically should not be taken by people with kidney disease. Raltegravir specifically should not be taken by people who have had muscle disease. You must tell your doctor about any medical problems you have, and about any medication you are taking, whether these are prescribed for you or bought over the counter.

Do not start any new medication without discussing it with your doctor first.

Just some of the drugs that are known to interact with the medicines include:

- Phenytoin or Carbamazepine (used for treating epilepsy)
- Rifabutin , Rifampicin or Erythromycin or Clarithromycin (used for treating bacterial infections)
- Aluminium or magnesium containing antacids

Pregnancy

You must tell your doctor if you could be pregnant. Experience of these drugs in early pregnancy has not shown any adverse outcomes.

You should take precautions to avoid becoming pregnant or fathering a child while taking the medicines.

These drugs do not affect your hormonal contraception

Breast feeding

Although these drugs do enter breast milk, breast feeding should not alter the decision to take PEP, as the risk to the mother and baby of acquiring HIV would be greater.

Taking your medicines

For this treatment to be effective, it is important that you take your medicines properly. Treatment should start as soon as possible after potential exposure to HIV. **Read the label on your medicines.** They should be taken as follows:

<u>Medicine</u>	<u>Morning</u>	<u>Evening</u>
Emtricitabine/Tenofovir disoproxil	Take one tablet with your breakfast	Nil
<u>Raltegravir</u>	Take one tablet with your breakfast (*see below) [*NB Alternatively the label instructions may (correctly) advise you to take two tablets once daily]	Take one tablet, ideally 12 hours after breakfast dose. (*see below)

Swallow the **Raltegravir** tablets whole. It is important that they are not chewed or crushed. The **Emtricitabine/ Tenofovir disoproxil** tablets can be swallowed whole or can be disintegrated in approximately 100ml of water, orange juice or grape juice and taken immediately.

Take the medicines at the approximate times indicated even if you have not actually had a meal.

If you forget to take a dose, take it as soon as possible and then continue as before. If you have difficulty remembering to take them, use an alarm, e.g. on your mobile phone.

You may drink moderate amounts of alcohol while taking these medicines (within normal recommended safe limits).

Side effects

Common side effects of the medicines are dizziness, nausea (feeling sick), diarrhoea, headache, vomiting (being sick), tiredness, weakness and muscle aches. See next page for more details.

These usually settle if you keep taking the medicines as directed, but simple painkillers or tablets to prevent sickness or diarrhoea may help. Tell your doctor if the symptoms persist.

Serious side effects are rare; they include allergic reactions, liver toxicity, pancreatic problems and reduced production of red bloods cells, causing anaemia, or white bloods cells, which can make you prone to infections.

Tell your doctor if you are concerned about any new symptoms.

General advice

Do not take more than the recommended dose. Do not give your medicines to others. Keep your medicines in a cool, dark, dry place, out of the reach of children.

Common side effects

Feeling sick, stomach pains, wind, diarrhoea,
digestive problems

Headache, muscle aches

Difficulty in sleeping, abnormal dreams,
tiredness, dizziness

Skin rash, itching

Rare side effects

Tiredness associated with shortness of breath

Fever associated with feeling unwell and other
symptoms

Jaundice (yellowing of the skin and eyes)

Useful Numbers

Highland Sexual health (HSH), Raigmore Hospital:	01463 704202
NHS 24:	111
Emergency Department (A&E), Raigmore Hospital:	01463 70 4444
Emergency Department (A&E), Caithness General Hospital:	01955 880229
Emergency Department (A&E), Belford Hospital:	01397 702088
Emergency Department (A&E), Mackinnon Memorial Hospital:	01471 822491

What you should do

Keep on taking the tablets with food – it often settles. Tell your doctor if it persists or becomes distressing.

Take a simple painkiller such as paracetamol or ibuprofen . Tell your doctor if it persists.

Take care driving or operating machinery. It may go away. Tell your doctor if it persists.

Tell your doctor if it persists.

What you should do

Tell your doctor – this could be due to anaemia.

Tell your doctor – this could be due to a low white cell count.

Tell your doctor – this could be due to liver toxicity.

SAFER SEX ADVICE**General advice for anyone who is sexually active**

Condoms protect against sexually transmitted infections (STI), including HIV. Condom use is recommended particularly in new or casual sexual relationships. STIs often have no symptoms, so testing for STIs is recommended when there has been change in sexual partner(s). STI testing and condoms are available free at Highland Sexual Health and Waverley Care [www.waverleycare.org].

For people recommended/started on PEP

While taking PEP, and until your final blood tests, condoms should be used for penetrative sex (vaginal/anal). HIV can be transmitted through vaginal and anal sex. The chance of HIV transmission through oral sex is negligible.

For people with low risk of HIV and other blood borne infections, where PEP was not recommended

No additional precautions are required. Reassurance.