

# Guidelines for non-occupational post-exposure HIV prophylaxis. Recommendations of GESIDA/CEEESCAT/ National Plan on AIDS

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## Presentation

**Infection by the human immunodeficiency virus has spread throughout the world during the last two decades. According to the latest calculations by UNAIDS, 37 million people are thought to be infected by this virus. At present, in Spain, there are more than 58,000 AIDS patients, according to data from the national register and approximately 120,000 people are thought to be infected by the virus. The HIV/AIDS epidemic is having many severe repercussions of different types: social, economic, ethical and health care. Therefore, institutions, organizations and**

**professionals involved in the control of the epidemic are and must be of different types. Primary HIV prevention programs are the basis of curbing the epidemic. Nevertheless, secondary prevention plays an important role in accidental exposure in the health care environment. Exposure to the virus in situations outside the area of health care is receiving more and more attention. Although scientific evidence on the effectiveness of prophylactic intervention with antiretrovirals is scarce, it is worth revising this subject and offering some guidelines in this situation. In any case, if a person accidentally exposed to the virus seeks a consultation, the attending physician must conceive the clinical**

encounter as an opportunity for health care education.

This orientation guide on non-occupational post-exposure prophylaxis is the fruit of an initiative by CEESCAT with the collaboration of GESIDA and the Ministry of Health and its Directorate General for Public Health via this Secretariat, which has been coordinated by Drs. Jesús Almeda and Jordi Casabona. We are grateful for the institutional work of the Department of Health and Social Security of the Generalitat de Catalunya and the scientific society SEIMC and their GESIDA group for their sponsorship and preparation of the document and we especially appreciate the fine work of both colleagues. This guide is a good example of the joint work of the AIDS Plan of an Autonomous Region and the Secretariat of the National AIDS Plan, since, starting with an initiative and the coordination of the Catalanian government, this Secretariat supports, participates actively in and distributes the final report to the other Autonomous Regions.

The wide participation of a group of professionals with experience in the different areas of AIDS who form part of the working group gives credit to the rigour and usefulness of this monograph. We are grateful to all of them, and to all the members of

the Clinical Advisory Council of the National AIDS Plan who have reviewed the text and made comments and suggestions.

This document is another good example of how health care professionals can carry out their work in care together with other activities in the area of prevention, and, in a more generic sense, those corresponding to public health. From this group perspective, their tasks are extended to include the community in which they carry out their work. We are sure that this guide will be useful to all physicians who individually care for people with behaviour which involves risk of acquiring HIV and who need counselling on the measures to be taken. These professionals include internists, infectious disease specialists, specialists in preventive medicine, emergency-room physicians, paediatricians and other care professionals. The guide has also been conceived for those in charge of the administrations and institutions of the National Health System, in such a way that its public health care professionals are able to adopt a global approach to the control of this epidemic.

**Francisco Parras Vázquez**

*Secretario del Plan Nacional sobre el Sida*

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## Introduction

Infections by the human immunodeficiency virus represent an important problem in public health. This is reflected in both the National AIDS Plan<sup>1</sup> and in «Pla de Salut de Catalunya 1999-2001»<sup>2</sup>.

The most effective methods for preventing HIV infection are those which avoid exposure to the virus (primary prevention). These preventive measures include: abstinence, sexual relations only with non-HIV-infected persons, correct use of a condom, abstinence from injecting drugs, and the use of sterile material when injecting these drugs.

Nevertheless, as a measure of secondary prevention, and to avoid development of the infection, antiretroviral drugs have also been proposed in cases of accidental exposure to HIV. For occupational exposure in the health care environment (understood as exposure by a health care professional to HIV in the course of his/her work), there are guidelines or recommendations, drawn up by official bodies and professional organizations<sup>3-8</sup>.

At the same time, non-occupational exposure may be defined as a situation in which

there is accidental contact with blood and/or other biological liquids, even when preventive measures have been taken, via the sexual or parenteral route outside the health care environment. In this case, given the biological plausibility, data on the efficacy and effectiveness of post-exposure prophylaxis (PEP) in vertical transmission<sup>9</sup>, in the health care environment<sup>10</sup> and in animal models<sup>11,12</sup>, some authors have also suggested using PEP in very specific situations<sup>1,15</sup>. In any case, and given the lack of clear evidence on the risk/benefit of this practice<sup>1,6,7</sup>, official recommendations are scant and with little agreement.

The National AIDS Plan Advisory Council has reviewed this subject non-monographically in its «Recommendations on the therapeutic and prophylactic use of antiretroviral drugs»<sup>6,7</sup> and some countries, such as France<sup>14</sup>, Switzerland<sup>15</sup>, Italy<sup>16,17</sup> or the United States<sup>18</sup> have drawn up specific guidelines for action. Given the lack of information in this respect, it is not easy to evaluate the needs and demands of non-nosocomial post-exposure prophylaxis. In any case, the data from different European and North American registers on exposure to HIV show that the de-

mands on sexual exposure are a potential use of PEP<sup>19-26</sup>.

Given the lack of data on the use of non-occupational post-exposure prophylaxis and for the purpose of documenting the situation in our environment, the Centre d'Estudis Epidemiològics sobre la SIDA de Catalunya (CEESCAT) has carried out a study on the knowledge, attitudes and behaviour of health care personnel and HIV risk behaviour groups, which highlights the fact that about 80% of the professionals who habitually treat HIV-infected patients have been faced with such situations, the most frequent being accidental needlesticks and sexual relations with unprotected infected individuals or those whose serological status is unknown. Furthermore, it was observed that, in different hypothetical risk situations, there was no agreement on when to administer prophylaxis and which drugs to administer.

In spite of the lack of evidence on the eventual efficacy and effectiveness of non-nosocomial PEP, but taking into account the existing extent of the demand and lack of consensus, CEESCAT (Departament de Sanitat i Seguretat Social de la Generalitat de Catalunya) in collaboration with the National AIDS Plan (Ministry of Health) and GESIDA (Spanish Society of Infectious Diseases and Clinical Microbiology) promoted in April this year, the creation of a working group to develop guidelines for cases of possible exposures to HIV outside the health care context. This group was formed by a multidisciplinary team of physicians, experts in public health, epidemiologists, paediatricians and health care administrators.

The guidelines presented in this publication are the fruit of the aforementioned group, and their main objective is to suggest guidelines for the different scenarios which, with regard to episodes of possible exposure to HIV, are eligible for PEP. The final decision will fall on the doctor and patient, but the fact that agreed guidelines have been proposed should help the professional to make the most homogeneous decisions possible, according to the degree of existing scientific evidence.

PEP must never override primary prevention of HIV and should only be considered in specific sporadic situations. Except for the lack of data on the efficacy of antiretrovirals in these cases, the secondary effects of this treatment, the possibility of developing resis-

tance and the importance of adherence to therapy must also be taken into account.

Implementation of these guidelines will also involve their correct explanation to the public, the planning of care resources, and the evaluation of their viability and potential effectiveness. In this last sense, from January 2001, CEESCAT will implement a research project financed by the European Commission, to systematically and homogeneously collect information on the supply and demand of non-nosocomial PEP in fourteen European countries, as well as the possible seroconversion of those people exposed to the risk.

## Objetives

The objectives of this document, aimed at health care professionals, are:

1. Provide agreed guidelines on the use of post-exposure chemoprophylaxis and other measures, in the case of possible accidental, non-occupational exposure to HIV.
2. Describe adequate follow-up of all exposed individuals, with and without administration of post-exposure chemoprophylaxis.

## Essential aspects

The use of zidovudine (AZT) for HIV prophylaxis seems to be efficacious in health care personnel<sup>10</sup> and has proven to be efficacious in preventing vertical transmission<sup>27</sup>. However, there are no studies which show its efficacy for exposure outside the health care environment. Despite this, these therapies could be considered in certain situations, given that the risks involved in some forms of sexual or intravenous exposure are at least as high as those in exposure in the health care environment<sup>1,28-35</sup>.

Data from research on the results of intervention to prevent risk of transmission of HIV after sexual or intravenous exposure are not conclusive<sup>36</sup>. Furthermore, it seems difficult to be able to implement a controlled clinical trial which can answer these questions. If a parallel is drawn with research into prophylaxis in the health care environment after risk exposure, the best results, from the point of view of research design, which have been obtained on the protective effect of AZT, come

from a case control study in health care professionals who had been exposed percutaneously to blood from HIV-positive patients. At present, in this situation, prophylaxis with AZT only is obviously no longer used, but combination regimens are in use. Logically, information on this prophylaxis comes from follow-up studies of cases involving accidents in health care and of the very unlikely risk of their seroconversion.

When a person seeks consultation with the health care system after exposure to this risk, the professional's answer should not be limited to whether or not prophylaxis with antiretrovirals is indicated. Each clinical encounter must therefore be contemplated as a very valuable opportunity to carry out individualized education about the risks of sexual or intravenous transmission of HIV, a diagnosis and treatment of possible concomitant STDs, the start of vaccination against HBV or the administration of an antitetanus vaccination. These are some examples of preventive action complementary to the evaluation of the risk of HIV transmission itself, and, given their importance, they are considered in the following sections of the present document.

### **Essential immunological and pathogenic aspects for post-exposure prophylaxis**

Since the beginning of the 1990s, many authors have expressed doubts about the efficacy of post-exposure prophylaxis, as the mechanisms of action of the antiretroviral drugs which are currently used are not the most suitable for this prophylaxis<sup>37</sup>. There are also pathogenic arguments against their efficacy. Zhang et al recently reported in the sexual transmission of SIV, that the viruses replicated mainly in CD4+ T cells, both dormant and activated, already at three days after exposure. Furthermore, most dormant cells remained infected despite antiretroviral treatment<sup>38</sup>. On the other hand, the pathogeny of intravenous infection is not precisely known. What does seem clear is that both the dendritic cells and macrophages play a very important role in the dissemination of the infection<sup>39</sup>. Similarly, in some cases there have been reports that the immune response both in mucosa and systemic could avoid HIV infection<sup>40</sup>.

Therefore, when considering post-exposure prophylaxis, it is necessary to take the following into account: 1) the drugs to be used should act as quickly as possible, and not only

on lymphocytes but also on macrophages; this means that antiretrovirals which do not need to be phosphorylated must be included in the combination, and 2) the time from exposure to start of therapy should be as short as possible; according to previous data, in three days dormant cells are already infected and antiretrovirals cannot eradicate the infection in them. As both the immune system and the mucosal barrier play an important role, irritants must be avoided in disinfection, since if the mucosa are lacerated, the effect could be the opposite.

### **Choice of antiretroviral drugs**

The success of non-occupational post-exposure prophylaxis is determined not only by the time before initiation, but also by the choice of antiretroviral treatment and adherence thereto<sup>50</sup>.

The choice of therapy schedule in these cases depends on several factors related to virological efficacy<sup>41</sup>.

Knowledge of the serological status of the source case and its characteristics with regard to viral load, immunological situation and pharmacological history, allows a therapeutic strategy aimed at obtaining maximum viral suppression to be designed<sup>50,41</sup>. On the other hand, ignorance of the serological status of the source case is a limiting factor in the new therapy plan and would thus have to be based on the prevalence of different mutations which confer phenotypic resistance to antivirals at this time and according to the geographic origin of the source case<sup>42,43</sup>. It is important to point out that, owing to the sequential incorporation of antiretroviral drugs in Spain, HIV-infected patients undergoing antiretroviral treatment form a very heterogeneous group with regard to pharmacological history, and so it is difficult to establish very strict regimens of empirical antiviral treatment in cases of non-occupational post-exposure prophylaxis. Thus, in a Spanish multicenter study<sup>44</sup> on prevalence of mutations detected by LiPA (hybridization line probe assay) in experienced patients, it was shown that the most prevalent in the retrotranscriptase gene were M184V (38.5%) and T215Y (30.1%) associated with lamivudine and zidovudine, respectively, whereas in the protease gene it was the mutation V82A associated with indinavir and ritonavir<sup>44</sup>. It is important to point out that the technique used for the genotypic

analysis did not enable mutations to be detected in codon 90 of the protease gene, thus the prevalence of this primary mutation for saquinavir and nelfinavir is not observed<sup>45</sup>.

General side effects, such as nausea, fatigue or cutaneous rash, are frequent in the antiretroviral regimens used for post-exposure prophylaxis and the reason for suspension in some cases<sup>46</sup>, especially if a protease inhibitor, such as indinavir, is included<sup>47</sup>. However, the rate and degree of these effects vary widely according to the clinical stage or previous situation of the patient receiving treatment. Furthermore, some non-nucleoside inhibitors such as nevirapine should also be used with restraint in post-exposure prophylaxis regimens, due to reports of severe hepatotoxicity<sup>48</sup>.

Just as important as the considerations above, is the need to provide a regimen which facilitates adherence. It has been shown that the lack of adherence is the main factor involved in virological failure and that it is also responsible for the limitation of future therapeutic options due to the generation of mutations which confer cross-resistance on the different antiretroviral drugs of a similar family<sup>30,41,45,49,50</sup>.

## General recommendations

The decision to give antiretroviral treatment as post-exposure prophylaxis must be taken by the physician and patient together on an individual basis. Prophylaxis must be started as quickly as possible, ideally within the first six hours. The period of time after exposure, during which treatment is recommended, is from 48 to 72 hours. Although there is no clear evidence, the effectiveness of this type of prophylaxis falls rapidly after exposure. People who seek consultation after this period will also receive a follow-up which will be explained in detail below.

Post-exposure prophylaxis for HIV with antiretrovirals is recommended only in those cases of sporadic and exceptional risk. In cases of repeated exposures, post-exposure prophylaxis is not recommended, and patients are informed of the risks and preventive measures they must take to reduce the risk. Nevertheless, anyone who is attended after exposure to HIV must receive suitable information on risk behaviour and preventive measures.

Emergency attention and follow-up of exposed individuals should be carried out in those centres which have trained personnel, a suitable laboratory and can dispense antiretrovi-

ral treatment. In the case of a person treated in a centre which does not fulfil these characteristics, the emergency regimen must be established in collaboration with the reference hospital. Training should be promoted for the personnel who are going to attend these emergency situations, either by adopting the protocols recommended in this document or by drawing up the centre's own protocols, such as those for health care personnel.

## Protocol

The person exposed shall be interviewed in order to:

1. Explain local measures to be taken.
2. Assess the risk of HIV transmission.
3. Assess the risk of transmission of other infections.
4. Recommend post-exposure prophylaxis regimens.
5. Establish follow-up of patients.

### Local measures to be taken

1. Percutaneous exposure: if the wound bleeds, let it bleed. Wash the wound with soap and water, apply disinfectant and avoid irritants.
2. Mucosal exposure: oral mucosa should be rinsed with clean water and the conjunctiva should be rinsed with abundant saline solution.

### Assessment of risk of transmission of HIV

Three levels of risk have been established, defined by: route or type of exposure, serological status of the source, risk behaviour and added risk factors. In cases of appreciable risk, prophylaxis is recommended, in low risk cases it may be considered, and in minimum risk cases it would not be recommended. In any case, follow-up of the person exposed, as detailed below, is recommended.

### Assessment of the risk of contagion by the sexual route (including sexual assault and penetration)

*Serological status of the source:  
known HIV infection\**

*With appreciable risk (0.8% to 3%)*

1. Receptive anal sex with ejaculation, without condom, with breakage of condom or bad use of condom.

2. Low risk, descending gradient (0.05% to 0.8%):
  - Receptive vaginal intercourse with ejaculation, no condom, breakage of condom or incorrect use of condom.
  - Receptive anal sex without ejaculation.
  - Receptive vaginal intercourse without ejaculation.
  - Insertive anal sex, no condom, breakage of condom or incorrect use of condom.
  - Insertive vaginal intercourse, no condom, breakage of condom or incorrect use of condom.
  - Receptive or active oro-genital sex, no condom, breakage of condom or incorrect use of condom.
5. Minimum risk (0.01% to 0.05%):
  - Oral sex without ejaculation

*Serological status of source: unknown\*\**

*Low risk (0.05% to 0.8%)*

- Receptive anal sex with ejaculation.

*Minimum risk (0.01% to 0.05%)*

- Receptive vaginal intercourse ejaculation, no condom, breakage of condom or incorrect use of condom.
- Receptive anal sex without ejaculation.
- Receptive vaginal intercourse without ejaculation.
- Insertive anal sex, no condom, breakage of condom or incorrect use of condom.
- Insertive vaginal intercourse, no condom, breakage of condom or incorrect use of condom.

- Oral sex with or without ejaculation, no condom, breakage of condom or incorrect use of condom.

Other situations such as kissing, contact of secretions (semen, vaginal secretions) with intact skin are considered without risk of contagion.

**Assessment of the risk of intravenous contagion**

Given the high prevalence of HIV infection among IVDUs in our environment, the distinction between known or unknown HIV serological status is not essential to the evaluation of risk.

*Appreciable risk (0.8% to 3%)*

- Sharing used syringes or needles.
- Deep needlestick or with abundant bleeding with a syringe immediately after being used.

*Low risk (0.05% to 0.8%)*

- Using a used syringe of unknown origin.
- Superficial needlestick or with a little bleeding, with a syringe immediately after being used.
- Contact of abundant blood with mucosa.

*Minimum risk (0.01% to 0.05%)*

- Sharing other materials: recipient, water, filter, cotton wool.
- Accidental needlestick with a little bleeding with a syringe of unknown origin.

**Assessment of the risk of transmissional of other infections**

*Infection by hepatitis B or C viruses*

In all the above-mentioned situations, the possibility of the patient becoming infected by one of these two viruses must be taken into account. In fact, the probability of becoming infected by one of these viruses in certain exposures is greater than that of becoming infected by HIV itself. Therefore, HIV follow-up must be accompanied by follow-up of HBV and HCV, in the same way as for health care workers.

In most cases, the serological status of the source with regard to these viruses is unknown. Thus, in the case of hepatitis B, it is necessary to find out whether the patient is vaccinated. If he/she is not, staff should act as indicated in the section on patient follow-up.

\* *Added risk factors.* Together with the previous risk factors it would be necessary to assess the presence of factors which involve an increase in the risk of HIV transmission and they should therefore be identified and taken into account when deciding on which action to take:

- The infectivity of the source: viral load above 5,000/10,000 copies, or any indicator of acute infection or advanced indicator of infection: (CD4 < 350), or the existence of AIDS-defining diseases.
- The presence of an STD or a genital lesion in the exposed person or the source.
- The appearance of bleeding or menstruation during sex.

\*\* *Added risk factors.* Only if the source is an intravenous drug user (IVDU) or belongs to groups with prevalence greater than or equal to 10% or is on a level with a source with a known positive HIV serology, and the risk factors from the previous point are taken into consideration.

### *Other infections*

The possibility of STDs should also be taken into account, thus suitable diagnostic measures should be established and, if necessary, antibiotic prophylaxis or therapy should be started.

It must also be remembered that in the case of intravenous exposure it may be advisable to find out whether the person exposed has been vaccinated for tetanus and act accordingly.

### **Recommended regimens in post-exposure prophylaxis**

If a PEP regimen is recommended or considered, adequate daily doses have to be administered for four weeks, and must always include some of the following combinations of antiretrovirals:

1. Two nucleoside reverse transcriptase inhibitors (NRTI) and a protease inhibitor (PI).
2. Two NRTI and a non-nucleoside reverse transcriptase inhibitor (NNRTI).

The regimen chosen should vary according to the pharmacological history and clinical situation of the source. There should be an attempt to discover the presence of other coinfections and the pharmacological antecedents (toxicity, tolerance, adherence, resistance and reasons for modifying treatment). In the case of therapeutic failure it would be necessary to use different drugs from those used by the source<sup>51</sup>. Only when there has been no therapeutic failure can the same drugs be given. If the source case is unknown, the prevalence of resistance at any given time in the geographic area will have to be taken into account.

The clinical history of the person exposed must also be known, and whether he/she is under treatment with some other type of medication which may interfere with the antiretroviral drugs and the secondary effects it could cause, will have to be taken into account, as will the presence of concomitant pathologies (diabetes, cirrhosis of the liver, hyperlipidemia, nephrolithiasis, polyneuropathy, etc.), pregnancy, etc.

### **Patient follow-up**

#### *Initial stage*

*General measures* The following points should always be assessed, although finding out the results should not delay the start of prophylaxis:

1. A hemogram and baseline analysis, including liver profile.
2. HIV serology (ELISA and confirmation, viral load and optionally, antigenemia p24), HBV, and HCV.
3. Pregnancy test, if a potentially teratogenic antiretroviral is being considered, or in any case of sexual exposure.
4. Counselling on risk behaviour and methods of prevention in the future, such as recommending barrier methods during follow-up and any later occasion of risk.
5. Collect available information from the source, especially with regard to possible co-infection and pharmacological antecedents (toxicity, tolerance, adherence, resistance and reasons for modifying treatment).
6. Assessment of vaccination against HBV and anti-HBV gammaglobulin.
7. Referral to the hospital follow-up unit (HIV outpatient clinic, preventive medicine), for later checkups.

In the case of intravenous exposure, the following should also be considered:

- Administer antitetanus vaccine, if the person exposed is not vaccinated.

In the case of sexual exposure, the following should also be considered:

- Culture for gonococcus and analysis for chlamydia and syphilis.
- Establish the diagnosis of other STDs, except in an emergency or in cases of difficult follow-up where antibiotic prophylaxis is prescribed for STD in a single dose: ceftriaxone 125 mg. (im), metronidazole 2 g (po) and azithromycin 1 g (po).
- If necessary, consultation with a gynaecologist.
- Follow other specific protocols, for example in the case of sexual assault.

#### *Further follow-up*

If prophylaxis is administered:

- 15 days after exposure: general analysis.
- 45 days after exposure: general analysis, serology for HIV\*, HBV and HCV, and repeat pregnancy test.

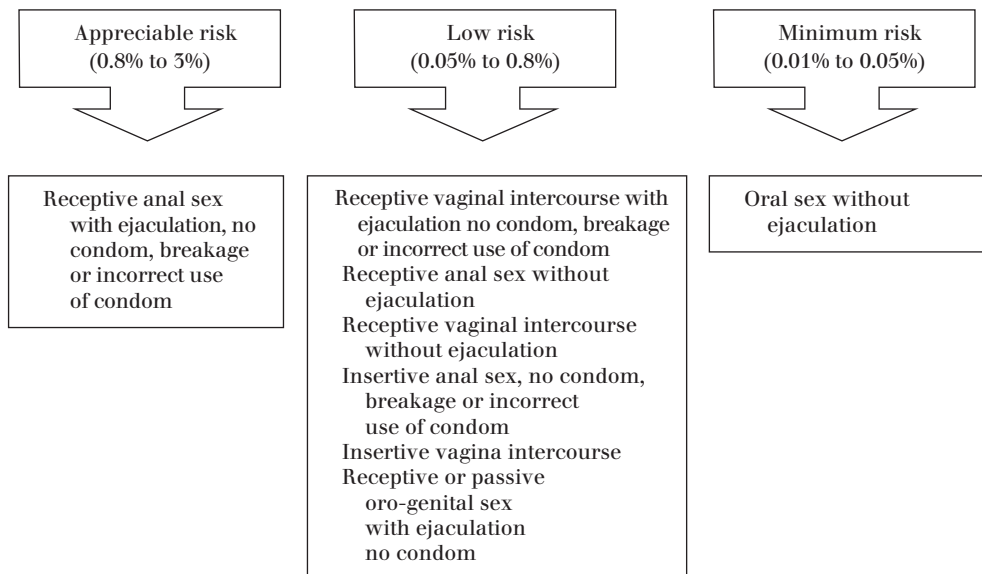
\*ELISA and confirmation, viral load when clinical suspicion of acute HIV infection and optionally antigenemia p24.

## HIV PROPHYLAXIS SCHEMA. SEXUAL ROUTE

### Previous considerations:

- Exposure is sporadic and exceptional
- Consultation before 48-72 hours after exposure
- Suitable medication and staff in centre
- Information is collected on source case
- Capacity for clinical follow-up of exposed person

### Serological status of source known as HIV-infected



**Added risk factors:** If in the situation which is being treated one of the following risk factors arises, overall risk must be assessed compared to a higher stage.

- *Infectivity of the source:* viral load greater than 5,000/10,000 copies, or if not, any indicator of acute infection or of advanced stage of infection (CD4 < 350), or existence of AIDS-defining diseases.
- *The presence of an STS or genital lesion* in the exposed person or source.
- *Appearance of bleeding or menstruation* during the sexual relationship.

#### When to give treatment?

*Appreciable risk:* recommended  
*Low risk:* considerer  
*Minimum risk:* not recommended

#### Drugs to be used:

Prophylaxis must always be with three drugs:  
 Always two nucleoside analogs  
 The third can be a PI or a non-nucleoside

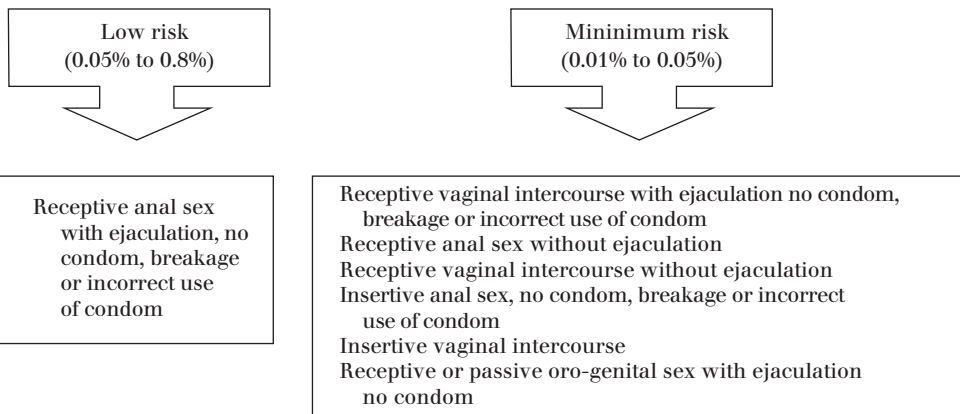
**Remember:** inform at all times about risk behaviour and future preventive measures

## HIV PROPHYLAXIS SCHEMA SEXUAL ROUTE (contd.)

### Previous considerations:

- Exposure is sporadic and exceptional
- Consultation before 48-72 hours after exposure
- Suitable medication and staff in centre
- Information is collected on source case
- Capacity for clinical follow-up of exposed person

### Serological status of source unknown



**Added risk factors:** Only in cases where the source is an IVDU or belongs to a group with prevalence of HIV infection greater than or equal to 10%, will the added risk factors be those used when the source case is known to be HIV-infected

### When to give treatment?

*Appreciable risk:* recommended  
*Low risk:* considerer  
*Minimum risk:* not recommended

### Drugs to be used:

Prophylaxis must always be with three drugs:  
Always two nucleoside analogs  
The third can be a PI or a non-nucleoside

**Remember:** inform at all times about risk behaviour and future preventive measures

- 3 months after exposure: serology for HIV\*, HBV and HCV.
- 6 months after exposure: serology for HIV\*, HBV and HCV.
- One year after exposure: assess whether serology is to be carried out for HIV\*.

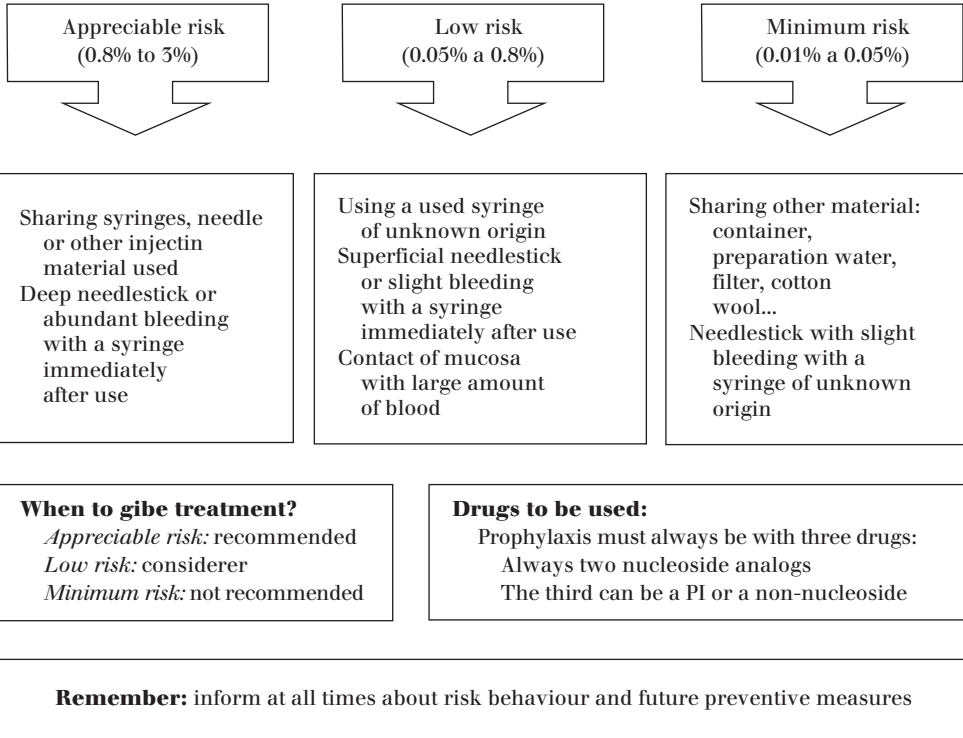
If prophylaxis is not administered:

- 45 days after exposure: general analysis, serology for HIV\*, HBV and HCV, and repeat pregnancy test.
- At three months: serology for HIV\*, HBV and HCV.

## HIV PROPHYLAXIS SCHEMA. PARENTERAL ROUTE

### Previous considerations:

- Exposure is sporadic and exceptional
- Consultation before 48-72 hours after exposure
- Suitable medication and staff in centre
- Information is collected on source case
- Capacity for clinical follow-up of exposed person



- At 6 months: serology for HIV\*, HBV and HCV.

All cases of exposure to risk of transmission of HIV should be notified and collected at the attending centre by the professional in charge of such cases in any of the following services (internal medicine, infectious diseases or preventive medicine).

Given the lack of empirical data on the efficacy and effectiveness of this type of intervention and the impossibility of carrying out a clinical trial, in 2001 CEESCAT and GESIDA will carry out an observational research

project to evaluate the viability and, if possible, the effectiveness of non-occupational PEP, by creating a prospective register of persons exposed to HIV outside the health care environment in 14 European countries (project 2000/SID/108 European Commission DG SANCO F4).

### Medical/legal considerations

#### Children

In children, the main mechanisms of transmission are mother-to-child and less commonly, the intravenous route via drug con-

ANNEX1

**Informed consent for post-exposure prophylactic measures**

I ..... /..... /....., have today sought consultation with doctor ..... of the Service/Unit, ..... Hospital ..... as a consequence of the accident reported, wherein it is stated that the source is  unknown/positive with regard to  VIH/  HBV/  HCV. Has explained to me what post-exposure prophylaxis involves and its possible secondary effects.

I accept the initiation of recommended post-exposure prophylactic measures against  HIV y/o  HBV. These involve .....

I agree to undergo the clinical and blood tests detailed below:

Today,  at 15 days,  45 days,  3 months,  6 months and  12 months

I do not agree to the initiation of recommended post-exposure prophylactic measures against HIV and HBV or to follow-up controls.

Patient: .....  
Name Signature Date

Doctor: .....  
Seal Signature Date

*Note:* This document is confidential, and its contents may not be revealed without the express permission of the undersigned patient. Any infraction of the confidential nature of this document is subject to the corresponding legal sanctions.

*This document must be kept in the patient's clinical history*

ANNEX 2

**Informed consent for case notification**

I ...../...../..... have today visited doctor ..... who has explained the reasons for collecting data on people who request prophylaxis against non-occupational exposure to HIV to me. I have been informed that these data will be treated in the strictest confidence for health care and statistical use in the Centro de estudios epidemiológicos del VIH/sida en Cataluña (CEESCAT). Hospital Universitari Germans Trias i Pujol, Carretera de Canyet, s/n, 08916 Badalona, and I hereby agree.

Patient: .....  
Name Signature Date

Doctor: .....  
Seal Signature Date

*Note:* This document is confidential, and its contents may not be revealed without the express permission of the undersigned patient. Any infraction of the confidential nature of this document is subject to the corresponding legal sanctions.

*This document must be kept in the patient's clinical history*

sumption, especially in adolescents and the sexual route which also affects adolescents. In these cases, post-exposure prophylaxis is suggested in the face of isolated sexual exposure without protection by a person known to be infected, whether in the case of sexual relations in adolescents or in situations of sexual abuse or rape in children of any age, such as after percutaneous exposure, in the context of drug addiction in adolescents or in the case of needlestick in a child by a person known to be HIV-infected. These situations are very uncommon in paediatrics in comparison with adults, but unfortunately they are not exceptional either<sup>52</sup>. Before starting chemoprophylaxis, correct information should be given to parents on the risks and benefits of this measure and informed consent should be obtained.

### Sexual assault

Sexual violence has important consequences in terms of psychological and physical trauma. Approximately 250 cases of aggression or abuse with penetration are reported every year in Catalonia<sup>53</sup>, although approximately 40% of such crimes are not reported<sup>54</sup>. In Spain, the number of cases of abuse with penetration reported up to June 2000 stood at 695. The risk of having contracted an STD, especially HIV infection is considerable in many cases. Given the greater prevalence of HIV among the prison population, cases of male sexual aggression in prison must be followed up. These individuals can benefit from antiretroviral treatment after exposure. It is always important to collect as much information as possible on the serological and/or clinical HIV status of the aggressor.

### Notification of authorities in the case of aggression

The relevant legal guidelines as stipulated in the Code of Criminal Law in force (art. 191)<sup>55</sup> and the Code of Medical Ethics of Catalonia (art. 31)<sup>56</sup> are to be followed in cases of sexual aggression and assault with syringe, only with the express authorization of the victim in the case of sexual assault.

### Assisted advice

In any case, to protect patient confidentiality, viral markers determined must be given, but the sample must not be identified by name. The source must be informed (when known) of the need to obtain a blood sample

for the corresponding analyses and to assure appropriate action concerning the person exposed. It must also be guaranteed that these analyses have no other function than that mentioned, although, depending on the results, appropriate treatment as permitted may be given the source.

Necessary care and treatment should be planned and made available during follow-up in the case results are virus seropositive.

### Informed consent

Before any clinical action is taken, the patient's right to free consent to diagnostic and therapeutic procedures necessary for the protection of his/her health must be guaranteed. Both in the case of adults and in that of children (parents), correct information should be given on the risks and benefits of this measure and informed consent should be requested. To this effect, the annex contains a proposed document for informed consent.

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