

Summary of German–Austrian HIV PrEP guideline

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Objectives

HIV Pre-Exposure prophylaxis (PrEP) is a strategy to reduce HIV transmission in people at risk. Aim of this first German–Austrian PrEP guideline is to provide professional guidance on: when and in whom to use PrEP, recommended laboratory tests before and while on PrEP, selection of drugs, prevention of adverse events as a consequence of missing accompanying medical care, and general handling of PrEP in adults and adolescents.

Methods

Commented summary of the S2k PrEP consensus guidelines released by the German and Austrian HIV medical societies to highlight the key recommendations of the guidelines.

Content

Detailed information about effectiveness of PrEP, when and in whom to use PrEP, as well as about additional monitoring of HIV PrEP are included in the HIV PrEP guidelines. Therewith detailed guidance for people being involved in PrEP counseling and associated care is provided.

Keywords: German–Austrian guideline, HIV, pre-exposure prophylaxis, PrEP

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Background

Infection with Human Immunodeficiency Virus (HIV) results in a life-long, chronic, currently not eradicable and potentially life-endangering disease. The major route of transmission of HIV in Austria and Germany is through sexual contact, mainly in vulnerable individuals and groups at risk such as men having sex with men (MSM) and people who inject drugs (PWID). While effective combination antiretroviral therapy (cART) in people living with HIV (PLWH) constitutes a cornerstone of treatment as prevention (TasP) strategies, individual HIV prevention in HIV-uninfected persons remains equally important particularly since a comparable effective HIV-vaccination will presumably not be available within the

near future. Here, barrier methods such as condoms, behavioral interventions such as harm reduction, or drug prophylaxis such as topic or systemic antiviral drugs can be used. All HIV prevention methods require detailed knowledge about HIV transmission, behavioral aspects and the epidemiological situation. HIV pre-exposure prophylaxis (PrEP) is a highly effective way of individual HIV transmission risk reduction. In clinical trials oral systemic PrEP demonstrated higher efficacy compared to topical drug administration [1,2]. Currently neither PrEP medication nor medical monitoring of individuals using PrEP is covered by statutory health insurance in Austria and Germany. In May 2018 the German AIDS Society (DAIG) summoned a group of HIV-specialists, epidemiologists, PrEP-activists, virologists and public health representatives to develop practical guidance for medical professionals who will do counselling, prescription and monitoring of individuals in need of PrEP. In view of mounting political pressure in the summer of 2018, the German Ministry of Health initiated a legislative process which may eventually lead to full coverage of PrEP costs by German public health insurances.

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[†]The authors for the German–Austrian PrEP consensus conference meeting 2018 presented in the Appendix.

Methods

Aims of the guideline

HIV Pre-Exposure prophylaxis (PrEP) is a strategy to reduce HIV transmission in people at risk. Aim of this first German-Austrian PrEP guideline is to provide professional guidance on: when and in whom to use PrEP, recommended laboratory tests before and while on PrEP, selection of drugs, prevention of adverse events as a consequence of missing accompanying medical care, and general handling of PrEP in adults and adolescents. The recommendations address all persons being involved in counseling, prescription and monitoring of PrEP as well as people at risk ("PrEP users").

Methods of the consensus meeting

The German AIDS society (DAIG) coordinated the development of guidelines. In line with the requirements of the "S2k consensus guidelines" of the Association of the Scientific Medical Societies in Germany (AWMF), other related medical societies were invited to send representatives/delegates to the first consensus meeting, which was held on the 24th of May 2018 in Hannover, Germany (AWMF No. 055-008). A detailed list of involved societies and persons is given in the original guideline version (see link below). Potential conflicts of interest of delegates are listed at the end of this document.

A draft version of the guidelines was prepared by selected DAIG delegates based on an unstructured literature review. All participants had access to the draft version of the guidelines prior to the consensus meeting. After discussion and potential revision of the recommendations, the physically present participants voted on the guidelines. The strength of consensus was evaluated using the following scoring system: strong consensus (> 95% consent), consensus (76–95% consent), broad agreement (51–75% consent), no consensus (≤50% consent). The strength of recommendations was documented as follows: strong recommendation ("shall"), recommendation ("should"), recommendation open ("could"). Negative recommendations are documented as such.

Timeline of development

The guidelines were drafted and involved medical societies were asked to nominate delegates until April 2018. Commenting and discussion were possible until May 23rd 2018 prior to the consensus meeting on May 24th 2018 in Hannover, Germany. At the consensus meeting

the draft recommendations were discussed, in part modified and voted on. By the end of May, the revised consensus version was prepared for final approval at the full member assembly of the German AIDS Society in Cologne, Germany, where it was accepted on the June 22nd 2018.

Key summary selection

For the purpose of this publication the key recommendations of the guidelines were summarized and comments were added accordingly. A full version of the guidelines (in German) is available at: <https://daignet.de/site-content/hiv-therapie/leitlinien-1/deutsch-oesterreichische-leitlinien-zur-hiv-praeexpositionsprophylaxe>

Summary of key recommendations of the German-Austrian PREP guidelines

The guidelines group focused on the development of a document with high practical relevance and ease of use in daily medical practice, including specific recommendations for general and specific situations. The following recommendations of the guidelines group are highlighted in bold followed by comments from both guidelines and the authors of this publication. For this summary, the original comments of the guidelines have been shortened, modified or extended.

Indications for oral HIV pre-exposure prophylaxis (PrEP)

Recommendation 1.1: Recommendation on the use of systematic oral HIV PrEP

Oral HIV pre-exposure prophylaxis (PrEP) should be offered as a preventive measure for people at substantial risk of becoming infected with HIV.

[Strong consensus]

Oral HIV PrEP refers to the use of effective systemic antiviral medication to reduce the likelihood of HIV transmission by up to 86% in HIV-negative individuals (with increased effectiveness up to 99% in persons with higher adherence [1]) who are at an increased risk of becoming infected with HIV [1,3–5]. WHO recommended PrEP in 2012 and extended it to specific risk populations in 2014 [2]. However due to lack of reimbursement of costs by statutory health insurance companies in Germany and Austria PrEP is not widely used in both countries and an important opportunity to reduce rates of new HIV infections is missed. In addition, PrEP use without proper counseling and monitoring may lead to

undetected toxicities and PrEP failure resulting with possible development of resistant HI-viruses.

Recommendation 1.2: Definition of substantial risk of HIV infection

There is a substantial risk of becoming infected with HIV in the absence of access to PrEP if HIV incidence is >3 per 100 person-years. This is particularly relevant for the following HIV-negative individuals:

- MSM or transgender people who indicate that they have had anal sex without a condom in the past 3–6 months and/or who will foreseeably do so in the months ahead or who have had a sexually transmitted infection (STI) in the previous 12 months
- Serodiscordant couples with one viremic HIV-positive partner who is not receiving antiretroviral treatment (ART), is on non-suppressive ART, or is in the early stages of ART (i.e. HIV-RNA levels that have not been < 200 RNA copies/mL for at least 6 months)

Furthermore, individual risk might be substantial, particularly for the following:

- People who have had condomless anal or vaginal sex with partners in whom an undiagnosed HIV infection is likely
- People who inject drugs without using sterile injection equipment

[Strong consensus]

Estimation of HIV risk is crucial in the diagnostic evaluation for potential PrEP users. WHO recommends PrEP in populations with an HIV incidence of more than 3 per 100 person-years without PrEP in the associated risk group [2]. Germany and Austria are low prevalence countries (estimated incidence of approximately 0.1%). This incidence is considerably increased (to up to 10%) in certain groups.

Outside the groups with the highest HIV transmission risk, certain individuals also have a high risk of HIV infection, such as people who have condomless sex with partners for whom the probability of an undiagnosed HIV infection is not negligible (e.g. sex workers who regularly have sexual intercourse without condoms).

To date, studies have shown a significant level of correlation between the individual demand for PrEP and an increased risk for HIV transmission, indicating a high accuracy of self-assessment [3,6]. Thus a thorough risk evaluation should be carried out in anyone who actively asks for PrEP and, where appropriate, PrEP should be prescribed. In particular, pre-existing STIs may indicate a high risk of HIV infection [4]. The guideline group discussed potential indicators of increased risk of HIV acquisition controversially, but concluded, that there is

no single definitive risk parameter. Therefore, an individual risk assessment should be carried out by health care providers experienced in sexual health and HIV medicine.

As the incidence of HIV infection among PWID is comparable to the overall HIV incidence [5], no general PrEP recommendation for PWID has been made. In single cases, however, PWID who do not use sterile injection equipment may face a high enough risk of HIV infection, in which cases PrEP may be indicated. This is particularly true for PWID who use so-called lifestyle drugs for sex (“chemsex”). Here, PrEP is strongly indicated due to the high probability that these individuals belong to MSM population with considerably higher risk of HIV transmission [7,8].

Recommendation 1.3: Selection of PrEP agents

The oral combination drug tenofovir disoproxil fumarate*/emtricitabine (TDF/FTC) should be used for PrEP. [Strong consensus]

(= or any other chemical salts of tenofovir disoproxil)*

Currently only TDF/FTC as PrEP has shown high efficacy rates and is therefore the only approved drug for PrEP in Germany and Austria [6,9]. TDF as single compound was reported to provide a lower level of protection [5,10]. Also topically applied agents showed a lower level of effectiveness [11,12]. Moreover, a current review supports TDF/FTC for PrEP use in terms of safety and tolerability [13]. The guidelines group agreed that no other option than oral TDF/FTC should currently be used for PrEP. PrEP users need to be educated about the potential harm of lower efficacy of using TDF alone or the potential risk of other harms by using non TDF/FTC.

Recommendation 1.4: Mode of intake

PrEP should be prescribed as a continuous, once-daily intake of TDF/FTC.

Intermittent intake of PrEP may be considered for specific cases, although this prescription is outside approval (“off-label use”). [Strong consensus]

The guideline conference decided to recommend continuous PrEP as the preferred mode of intake [6]. At the time of the preparation of the guidelines, IPERGAY was the only study to have prospectively examined event-driven PrEP as an alternative option with high efficacy rates [14].

At the consensus meeting, a controversial discussion on continuous and event-driven PrEP emerged, mainly between community advisors and HIV physicians. Besides a lower level of evidence for intermittent vs. continuous PrEP, mainly the complicated dosing scheme of IPERGAY and the risk of changes in condom use and sexual behaviors in the context of PrEP lead the guideline meeting to recommend continuous PrEP as the preferred option. Nevertheless, in educated users with only

occasional risk exposure event-driven PrEP might be an option. The mode of dosing of event-driven PrEP needs to be discussed in detail before initiation of PrEP and requires a high level of knowledge and compliance of the PrEP user. For this reason, the guideline meeting recommended event driven PrEP in MSM only as an alternative option. Due to the lack of data on event-driven PrEP intake for vaginal intercourse and slower accumulation of drug in the cervicovaginal tissues [15], event-driven PrEP is not recommended for vaginal sex. Chronic hepatitis B virus infection is a contraindication for this approach due to the possibility of inflammatory “flares” of liver enzymes after a person has stopped taking TDF/FTC [14].

Recommendation 1.5: PrEP in the context of other prevention measures

HIV PrEP should only be prescribed in combination with risk reduction counseling concerning HIV, sexually transmitted infections (STIs), and viral hepatitis.

In this context, it should be emphasized that HIV PrEP reduces the risk of HIV transmission, but it does *not* reduce the risk of acquiring other STIs. [Strong consensus]

TDF/FTC is only suitable for reducing the likelihood of HIV transmission [6,9]. The consensus meeting acknowledged that PrEP use may lead to risk compensation and a consecutive increase of STI's among PrEP users. Therefore, it was emphasized that PrEP should be used as part of a combined prevention approach and only be prescribed in combination with other sexual health interventions (e.g., more frequent HIV-testing, recommendation of condom use, regular STI screening tests and consultations). This may in fact broaden the preventive effects of PrEP. However, in the absence of national STI screening programs and the paucity of STI and sexual health clinics in Austria and Germany, offering PrEP as part of a HIV prevention package may prove to be challenging.

Recommendation 1.6: Which conditions must be met and which laboratory tests must be carried out prior to beginning of PrEP and during PrEP?

In addition to HIV risk evaluation at a minimum, the following tests must be carried out to evaluate possible contraindications and/or preconditions:

- Current negative HIV serology (fourth-generation ELISA with p24-antigen/HIV ab), not older than 14 days; repeat 4 weeks after initiation of PrEP.
- Exclude replicative hepatitis B (HBV) virus infection, using serology (positive HB surface antigen and/or anti-HB surface antibodies) or check hepatitis B virus (HBV) immunity (HB surface antibodies; recommend HBV vaccination if applicable).

- Exclude renal impairment using serum creatinine determination (eGFR must be at least 60 mL/min and should be > 80 mL/min)

[Strong consensus]

The proper diagnostic evaluation before PrEP use includes an examination of pre-existing conditions, i.e. potential contraindications in addition to determination of HIV acquisition risk. Exclusion of a present HIV infection using p24 antigen/HIV antibody ELISA testing (fourth-generation test) is mandatory. The guideline meeting opposed the routine use of HIV nucleic acid amplification testing (NAAT, PCR) due to its high costs unless an acute HIV infection is suspected. Replicative, HBs antigen-positive, HBV infection needs to be excluded before initiation of PrEP and HBV vaccination is recommended in risk groups wherever a lack of HBV immunity is documented. For MSM, this also includes vaccination against hepatitis A virus, particularly in light of the recent outbreaks in Europe [14,16]. The authors add that this consultation should also be taken as a chance to double-check vaccination status in general according to local guidelines.

Due to the potentially adverse renal effects of TDF, TDF/FTC should only be used in people with normal kidney function, as assessed by measuring by eGFR. Patients aged > 40 years and those with an eGFR < 90 mL/min have a slightly elevated risk of renal function deterioration; therefore, these patients should be monitored more closely. No recommendation can be made beyond an individual risk/benefit assessment in persons with renal impairment, indicated by an eGFR < 60 mL/min.

As early signs of TDF-associated nephropathy are challenging to assess in clinical settings, the guidelines group focused on recommendations that are easy to implement. The guidelines meeting highlights a simple and standardized way of renal function testing (eGFR by serum creatinine determination) and opposed routine determination of serum phosphate and/or urine dip stix, due to its little additive information on renal tubular toxicity of TDF. Osteoporosis screening, diagnosis, and treatment should follow the guidelines for HIV-negative persons.

Recommendation 1.7: At what point after PrEP initiation can HIV protection be deemed sufficient?

The patient should be informed that the onset of the protective effects of PrEP is delayed. Although studies have not conclusively clarified the exact point in time when the protective effect from continuous PrEP begins, on the basis of drug concentration studies it can be assumed that there is sufficient protection against HIV acquisition by the second day after initiation of

continuous PrEP for colorectal mucosa and by the seventh day for female genitalia.

[Strong consensus]

None of the studies found in the literature have conclusively determined exactly when the protective effect of PrEP begins. As this topic is of high clinical interest in daily practice, the guidelines meeting decided to advise based on current evidence: Theoretical modeling shows maximum tissue levels of FTC and tenofovir (TFV) on the second day after beginning continuous intake in colorectal mucosa in men and on the seventh day in vaginal mucosa in women [1,17]. Earlier effective HIV risk reduction might be given, as indicated by the IPERGAY study [14]. However, a definitive determination will not be obtained in near future.

Recommendation 1.8: What is the earliest point in time after the last potential exposure to HIV that PrEP can be ended at user request?

The available data regarding this question are insufficient.

[No consensus]

The consensus conference had an intensive discussion on the recommended duration of PrEP intake after the last risk event. Two strategies were proposed: Stopping PrEP 48 h after the last risk contact based upon IPERGAY data or continuing for another 28 days as done in post-exposure prophylaxis (PEP) [14,18]. As no definitive study data on this question are published, no consent was reached and the guidelines meeting decided against making a recommendation.

Recommendation 1.9: Which examinations or measures are necessary when PrEP is resumed after PrEP interruption?

The available data on this question are insufficient. On the basis of expert opinion, the consensus conference recommends proceeding with HIV testing in the same way as at initial contact for persons restarting PrEP after interrupting continuous PrEP for ≥ 7 days if they had had risk contact(s) during this interruption period (see 1.7).

[Consensus]

Due to the diagnostic window of the p24 antigen/HIV antibody fourth-generation ELISA test, there is a risk of an early (still seronegative) HIV infection after (re-)starting PrEP. Therefore, in line with the approach at PrEP initiation, repeated HIV serology should be performed to exclude an infection 4 weeks after restarting HIV PrEP and to prevent ineffective TDF/FTC therapy of an undiagnosed, underlying (early) infection, which can lead to rapid emergence of resistant HI-viruses. As the IPERGAY study assessed event-driven PrEP with HIV testing every 3 months without additional testing [14], this recommendation was intensely discussed by the guidelines meeting

with some meeting participants abstaining from voting due to insufficient data. In conclusion, it seems important to discuss the risk of resistance evolution due to undiagnosed HIV-infection with the person who is interrupting PrEP.

Recommendation 1.10: What counseling is recommended for PrEP users at the beginning of PrEP?

Prior to each HIV PrEP prescription, a comprehensive briefing and counseling should be done tailored to the existing knowledge of the user. At this consultation, the following topics (at a minimum) should be discussed:

- Risk reduction based on the effectiveness of oral HIV PrEP
- STI transmission risk and vaccination prevention
- Test procedures (including the “diagnostic gap” of HIV serology)
- Other preventive measures (e.g., condoms, therapy as prevention, post-exposure prophylaxis)
- The importance of adherence
- Accompanying examinations
- Limitations of PrEP, including the possible development of resistance
- Potential side effects, interactions, and complications of PrEP
- Symptoms of acute and/or primary HIV infection

[Consensus]

The cooperation of a well informed patient is a prerequisite for the maximum effectiveness of PrEP. The patient should therefore be informed about the protective effect of PrEP; the importance of adherence; the issue of the “diagnostic gap” of 4th generation HIV serology; the limitations of PrEP; any potential complications and side effects, including the risk of resistance development; other preventive measures and their contribution to protection against HIV infection; and the accompanying examinations required, as well as those for STIs. Every PrEP consultation should be used as an opportunity to provide advice regarding protection measures against HIV acquisition and other STIs.

Special measures and situations prior to and during PrEP

[Consensus]

The success and safety of PrEP relies on regular supervision by a medical professional. The need for regular diagnostic evaluation should be discussed with PrEP users. In addition to the consultation, it is recommended that users find reliable sources of information about PrEP in their language on the internet (German peer group information such as <https://prep.jetzt>).

Table 1 Necessary accompanying and laboratory examinations prior to, during, and at the end of PrEP

	Prior to beginning PrEP	During PrEP	At the end of PrEP
HIV serology (fourth generation HIV ab and p24 ag)	X	At initiation with one repeated test 4 weeks after initiation AND then every other 3 months	6 weeks after last risk contact
Hepatitis B* virus and hepatitis C virus (HCV) serology	X	HCV Ab screening every 6–12 months for HCV-seronegative users	
Syphilis serology	X	Every 3 months	X
Gonorrhea NAAT†	X	Every 3(–6) months	X
Chlamydia NAAT†	X	Every 3(–6) months	X
Serum creatinine for examination of eGFR	X	eGFR > 90 mL/min and age < 40 years: every 6–12 months. eGFR 60–90 mL/min and/or age > 40 years and/or risk factors for renal conditions: every (3–)6 months eGFR < 60 mL/min: see text	X
Consultation for risk reduction and diagnostic evaluation	X	Every 3 months	X
Medical history indicating symptoms of an STI	X	Every 3 months	X

*Anti-Hepatitis B surface antibody (anti-HBs Ab), Hepatitis B surface antigen (HBsAg), anti-Hepatitis B core antibody (anti-HBc Ab)
†Pharyngeal, anorectal, genital/urine.

With regard to nephrotoxicity monitoring, a screening strategy adapted to the individual risk of renal disease was proposed to reduce laboratory monitoring (see Table 1). Due to the low sensitivity of urine dipstick testing to detect renal tubular disease and the wide nutrition dependent variability of serum phosphate the consensus meeting decided not to use these markers for monitoring the emergence of renal toxicity under TDF.

Regular medical monitoring of symptoms of other STIs is recommended due to the observed changes in risk behavior in PrEP users. A meta-analysis has shown a relative increase of STI incidence among PrEP users [19]. Therefore, a regular 3-monthly serological examination is recommended for syphilis; for previously HCV-seronegative persons, and an HCV antibody test is recommended every 6–12 months. For asymptomatic PrEP users, smear tests for *Chlamydia trachomatis* and *Neisseria gonorrhoeae* (pharyngeal, genital/urine, and anorectal; pooling is an option where applicable) should be carried out every 3(–6) months. Some participants of the guideline-meeting highlighted the challenge of high rates of asymptomatic carriers of STIs with the need for more frequent testing (e.g. every other 3 months). For *C. trachomatis* and *N. gonorrhoeae* larger screening intervals and sampling only at specific anatomic cavities have been discussed and may be appropriate for some PrEP users depending on their sexual behavior. For symptomatic patients and/or those with a positive test result, we refer to the appropriate STI guidelines.

Recommendation 2.2: When are additional HIV diagnostic tests required during ongoing PrEP?

If symptoms that are consistent with a primary HIV infection appear during PrEP (especially fever, rash, neurological symptoms, oral ulcers, and/or generalized lymphadenopathy) after potential exposure to HIV in the preceding 6 weeks, a plasma HIV-RNA test and a fourth-generation p24 antigen/HIV antibody screening test (with a confirmation test in the case of positivity) should be carried out.

[Consensus]

Despite the high level of protection provided by PrEP, no absolute protection against HIV infection is given. If HIV infection occurs during PrEP, there is a risk of rapid development of resistance to FTC and TDF. In the case of suspected primary HIV infection, early diagnosis is crucial, hence using HIV-RNA PCR in combination with a fourth-generation p24 antigen/HIV antibody test is recommended [20]. The authors add that the situation of acute HIV infection while on PrEP has been reported rarely to date, but is crucial in terms of HIV resistance selection. Therefore, all PrEP users need to be advised appropriately.

Recommendation 2.3: What course of action should be taken in the case of suspected primary infection in a PrEP user?

If an acute retroviral syndrome is suspected during ongoing PrEP (especially if the person has fever, rash, and generalized lymphadenopathy), the person should immediately be referred to a center specialized in HIV care, and

- in the event of a positive plasma HIV-RNA test and/or a positive serological confirmation test, treatment with PrEP should be discontinued and the patient should be

referred to an HIV care provider for immediate initiation of effective antiretroviral triple therapy with a high barrier to resistance. Genotypic resistance analysis should be carried out as early as possible (if possible from the first positive plasma sample). Antiretroviral therapy must be adjusted accordingly.

- in the event of a positive HIV antibody test in the absence of evidence of HIV-RNA, PrEP should be continued, and both results should be re-checked after 2–4 weeks. If the screening test and the following confirmation test provide confirmation or if HIV-RNA is positive at the follow-up examination, the course of action outlined under a) should be taken. (There is a minority vote declining the recommendation to continue PrEP in this situation.)

[Consensus]

To date, only a few cases HIV transmissions have been documented among PrEP users. As a result, it is difficult to deduce substantiated recommendations regarding how to proceed in a case of suspected infection. Should evidence of an HIV infection be found as in scenario a) (HIV-RNA in the plasma), then transition from PrEP to an effective HIV triple combination therapy with a high barrier to resistance (e.g., one based on integrase or protease inhibitors) is recommended regardless of the HIV antibody test result. In addition, HIV experts should be consulted in such a scenario. In some cases, HIV therapy may need to be modified based on a resistance analysis carried out close to this point in time.

An intense discussion evolved on the scenario of only the screening test (ELISA) being positive with no evidence of HIV-RNA, despite the patient showing symptoms. This is probably a false-positive test result which can be expected with frequent testing because HIV ab/p24 ag ELISA

(fourth-generation) screening tests have a specificity of 96–99% with a high sensitivity (around 99%). The majority of the consensus meeting recommended to continue PrEP and after 2–4 weeks to carry out a confirmatory HIV ab/p24Ag ELISA (fourth-generation) test, as well as an HIV-RNA test. However, it is important to note, that the professional healthcare provider information recommends stopping PrEP in such a scenario. A minority voted to recommend discontinuation of PrEP in this situation.

If PrEP is stopped for any reason, a person at risk for HIV acquisition must be informed about the potential HIV transmission risk with unchanging risk behaviors.

Recommendation 2.4: What measures are to be taken in the event of a positive HIV screening test (ELISA) without symptoms of acute HIV infection during PrEP?

In the case of a positive HIV screening test during ongoing PrEP treatment in the absence of typical symptoms of an acute HIV infection, it is recommended that immediate plasma HIV-RNA testing is carried out from the same blood sample or from a sample taken without delay. Further procedures should follow the recommendations under 2.3.

[Strong consensus]

Recommendation 2.5: Prescribing PrEP

Only drugs approved in Europe should be prescribed for PrEP

[Strong consensus]

Although in general no difference in the effectiveness between different TDF/FTC preparations is expected, the guidelines meeting only recommends EU approved PrEP formulations and opposes the use of non-approved generic drugs obtained via illegal routes from outside European Union. This is to ensure appropriate medical guidance by prescription and to reduce potential harm of non-EU approved drugs.

Potential Conflict of Interests

Dr. Christoph D. Spinner received grants for travel and participation in advisory boards of AbbVie, Bristol-Meyers Squibb, Gilead, Janssen-Cilag, MSD, and ViiV. Research grants from Gilead Sciences, Janssen-Cilag, and ViiV Healthcare, German Center for Infection Research (DZIF). Dr. Gerold Felician Lang received grants for travel and participation in advisory boards from GSK/ViiV and Gilead and speaker's honoraria from Gilead. Dr. Christoph Boesecke Honoraria and/or travel grants for lectures and/or consultancies from AbbVie, Gilead, Janssen, MSD, ViiV. Funding by Deutsche Leberstiftung, German Center for Infection Research (DZIF), Hector Stiftung, NEAT ID. Dr. Heiko Jessen received payment for study cost from Gilead Sciences GmbH and U.S. Military HIV Research Program; for Board membership from ViiV Healthcare GmbH and MSD GmbH; for speaker activities from ViiV Helathcare GmbH, Janssen-Cilag GmbH and Hormosan Pharma GmbH; and for travel/accommodation/meeting expenses from Gilead Sciences GmbH Janssen-Cilag GmbH, ViiV Helathcare GmbH and MSD GmbH. Dr. Carl Knud Schewe received speaker's honoraria from AbbVie, Gilead Sciences, MSD, Bristol-Myers Squibb, ViiV Healthcare, and Janssen-Cilag. Potential conflicts of interest for all members of the 2018 German-Austrian PrEP consensus conference are available at <https://daignet.de/site-content/hiv-therapie/leitlinien-1/conflict-of-interest-statements-prep>

Recommendation 2.6: PrEP and pregnancy

Should a pregnancy occur during PrEP, PrEP should be continued when the risk of HIV acquisition remains unchanged unless careful risk-benefit considerations indicate otherwise. [Consensus]

Because no clustering of malformations or complications during pregnancy have been observed when HIV-infected pregnant women have been treated with TDF/FTC as part of the prevention of transmission of HIV infection from mother to child, experts hold that fetal exposure to TDF/FTC is justifiable as long as the risk of HIV acquisition for the pregnant woman continues. Although the likelihood of a pregnant PrEP user is low due to general risk attribution in pregnant women in Germany and Austria. However, the guidelines meeting decided to advise to seek for medical advice in HIV and pregnancy experienced centers for further counseling.

Recommendation 2.7: Handling of sexually transmitted infections during PrEP

Sexually transmitted infections during PrEP should be treated in accordance with the relevant STI guidelines.

[Strong consensus]

In general, all STIs should be treated in accordance with the appropriate local guidelines. Moreover, PrEP should also be used to check vaccination status, particularly in relation to viral hepatitis A/B immunity as well as meningococcal immunity, if applicable. The guidelines meeting refers to corresponding local STI guidelines.

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Appendix

Organization	Name (city)	E-mail of present members at consensus meeting
Coordination German AIDS society	Prof. Dr. Hans-Jürgen Stellbrink (Hamburg) * PD Dr. Stefan Esser (Essen) Dr. Annette Haberl (Frankfurt)* Dr. Heiko Jessen (Berlin)* Dr. Katja Römer (Cologne) Prof. Dr. Andreas Plettenberg (Hamburg) Prof. Dr. Jürgen Rockstroh (Bonn) Dr. Stefan Scholten (Cologne) PD Dr. Christoph D. Spinner (Munich)* Christoph Weber (Berlin)* Prof. Dr. Hendrik Streeck (Essen) Dr. Gerold Felician Lang (Vienna)* Dr. Bernhard Haas, MBA (Graz)* Dr. Knud Schewe* (Hamburg)	stellbrink@ich-hamburg.de Annette.Haberl@hivcenter.de heiko.jessen@praxis-jessen.de juergen.rockstroh@ukbonn.de christoph.spinner@tum.de ch.weber@online.de g.lang@aon.at bernhard.haas@kages.at schewe@ich-hamburg.de
Austrian AIDS society	PD Dr. Clara Lehmann (Cologne)* Dr. Philipp de Leuw (Frankfurt) <i>(No representative)</i>	Clara.Lehmann@uni-koeln.de
Deutsche Arbeitsgemeinschaft niedergelassener Ärzte in der HIV-Versorgung (DAGNÄ) German infectious diseases society (DGI)	Prof. Dr. Norbert Brockmeyer (Bochum) vertreten durch Dr. Anja Potthoff* (Bochum) <i>(No representative)</i>	anjadruecke@hotmail.com
German society of Internal Medicine (DGIM) German STI society (DSTG)	Dr. Stefan Schmiedel (Hamburg) Dr. Rolf Kaiser (Cologne)* Dr. Rolf Kaiser (Cologne)* Dr. Ulrich Marcus (Berlin)* Armin Schafberger (Berlin)* Siegfried Schwarze (Berlin) Nicholas Feustel* (Hamburg) Harriet Langanke (Cologne)* Dr. Johanna Claass (Hamburg)*	rolf.kaiser@medizin.uni-koeln.de rolf.kaiser@medizin.uni-koeln.de Marcusu@RKI.de armin.schafberger@dah.aidshilfe.de n.feustel@georgetownmedia.de harriet.langanke@stiftung-gssg.org johanna.claass@bgv.hamburg.de
Society of infectious and tropical diseases in dermatology within German society of dermatology (ADI-TD) Deutsche Tropenmedizinische Gesellschaft Society of Virology (GfV) Paul-Ehrlich society (PEG) Robert Koch Institute (RKI) Deutsche Aids Hilfe (DAH) Projekt Information Community Gemeinnützige Stiftung Sexualität und Gesundheit (GSSG) Behörde für Gesundheit und Verbraucherschutz Hamburg		

* Full list of members of the 2018 HIV PrEP guideline consensus conference present at 24th May 2018 in Hannover, Germany.