

## HIV PEP - Human bite exposure recommendations – Evidence to decision

### Recommendation

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| <b>Generally NOT recommended</b>   | GRADE: 2D <sup>1</sup> |
| <p>HIV PEP is <b>generally NOT recommended</b> following a human bite.</p> <p>HIV PEP <b>should only be prescribed</b> where <u>all four</u> of the following criteria are met:</p> <ol style="list-style-type: none"> <li>1. It is within 72 hours of the exposure</li> <li>2. There was deep tissue exposure</li> <li>3. The biter was, with complete certainty, bleeding from their mouth prior to the bite</li> <li>4. The biter is known or suspected to have a detectable viral load</li> </ol> <p>If <u>all four</u> criteria are met, HIV PEP is indicated. Outside of this, HIV PEP should not be prescribed without discussion with a physician specialising in HIV, where it may be considered in rare extreme cases [43-51].</p> |                        |

<sup>1</sup>Weak recommendation against, very low certainty evidence

### Evidence to decision

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| <p><b>Benefits and harms</b></p> <p>The potential toxicity and inconvenience of administering HIV PEP is likely to outweigh the benefits unless there is clear specific factors that increase the risk of HIV transmission. Where there is a clear specific factor that increases the risk of transmission, the benefit of prescribing HIV PEP outweighs the harms associated with the potential toxicity and inconvenience of PEP.</p> |
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| <p><b>Certainty of the Evidence</b></p> <p>Salivary proteins play a role in the inactivation of HIV and preventing its infectivity [43]. HIV virus is detectable in saliva, especially in immune compromised patients as CD4 count declines and plasma viral load increases. Infection with HIV after a bite from a patient with HIV “is biologically possible but remains unlikely” [44].</p> <p>Cases of transmission have been reported in case reports, but the exact risk of transmission is unknown, and thought to be very low [45, 46]. In the cases reported, blood was present in the mouth of the biter, and the skin of the recipient was broken. A systematic review published in 2018 concluded that the overall risk of acquiring HIV from a bite by a person living with HIV is negligible, but the risk is increased by presence of blood in the saliva plus a high viral load of the perpetrator plus deep wounds being inflicted [47]. There was considerable heterogeneity in the quality of the published literature within this systematic review and therefore the overall certainty of the evidence informing this recommendation was very low.</p> <p>Although there are reports of HIV transmission from a dentist who had AIDS to patients, it has never been demonstrated that a dentist acquired HIV from any of their patients in the context of their work [48, 49]. Cases of other dentists and dental health practitioners who developed HIV after presumed occupational</p> | Very low |
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## Guidelines for the Emergency Management of Injuries (EMI) and Post-Exposure Prophylaxis (PEP)

contact are reported, but no evidence exists to demonstrate the exact mode of transmission [50]. Given that exposures to dentists during procedures are common, at a reported rate of 0.9 per 1000 procedures, [51] and there are no documented transmissions of HIV to dentists from patients, the rate of transmission overall is very low.

### Values and preferences

The evidence supports that the risk of HIV transmission from a human bite is very low. However, certain factors may increase the risk of transmission. Where a decision is made by a health professional to either prescribe or not prescribe HIV PEP, it is likely that most people in this situation would want the suggested course of action but many would not. Healthcare providers should discuss the evidence with patients as well as consider their values and preferences.