# 4. Hepatitis A vaccines and long-term protection

## 4a) Inactivated hepatitis A vaccine

**Author(s):** Ott J, Wiersma S
**Date:** 2011-09-28
**Question:** Should inactivated hepatitis A vaccine be used for long-term protection against hepatitis A?
**Settings:** General population

| Quality assessment | | | | | | | No of patients | | Effect | | Quality | Importance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No of studies | Design | Risk of bias | Inconsistency | Indirectness | Imprecision | Other considerations | Inactivated hepatitis A vaccine | Control | Relative (95% CI) | Absolute[3] | | |
| **anti-HAV antibodies >5 years after immunization (follow-up 5-14 years; measured with: GMC, GMT, or % seroprotection post vaccination)** | | | | | | | | | | | | |
| 8 | observational studies | Serious[1] | no serious inconsistency | no serious indirectness | serious[2] | none | 720 | - | - | GMT range from 62-1587[2] | ⊕OOO VERY LOW | IMPORTANT |
| **anti-HAV antibodies 14 years after immunization (children, 3-dose, Havrix) (follow-up mean 14 years)** | | | | | | | | | | | | |
| 1 | observational studies | no serious risk of bias | no serious inconsistency | no serious indirectness | no serious imprecision | none | 56 | - | - | GMT range from 131-227[5] | ⊕⊕OO LOW | IMPORTANT[4] |

[1] Loss to follow-up reported to be up to 50% and increased with duration of follow-up. There is also a risk of confounding because other factors potentially associated with antibody response are not considered.
[2] Results had wide ranges and wide confidence intervals and often only reported GMC/GMT and not ranges of data.
[3] Results listed as mean geometric titer or concentration.
[4] Three different schedules were used (0, 1, 2 mo; 0, 1, 6 mo; 0, 1, 12 mo) in this study.
[5] Seroprotection rate ranged from 86-100% depending on schedule.

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## 4b) Live attenuated hepatitis A vaccine

**Author(s):** Ott J, Wiersma S
**Date:** 2011-09-28
**Question:** Should single dose live attenuated hepatitis A vaccine be used for long-term protection against hepatitis A?
**Settings:** general population

| Quality assessment | | | | | | | No of patients | | Effect | | Quality | Importance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No of studies | Design | Risk of bias | Inconsistency | Indirectness | Imprecision | Other considerations | Single dose live attenuated hepatitis A vaccine | Control | Relative (95% CI) | Absolute | | |
| **anti-HAV antibodies (follow-up 7-15 years; measured with: GMC, GMT, or % seroprotection post vaccination; Better indicated by lower values)** | | | | | | | | | | | | |
| 5 | observational studies | Serious[1] | no serious inconsistency | no serious indirectness | serious[2] | none | 871 | - | - | GMT range from 80-918[2] | ⊕OOO VERY LOW | IMPORTANT |
| **anti-HAV antibodies 15 years after immunization (chilren, 1-dose, H2 strain LA) (follow-up mean 15 years; Better indicated by lower values)** | | | | | | | | | | | | |
| 1 | observational studies | Serious[1] | no serious inconsistency | no serious indirectness | serious[2] | none | 220[3] | - | - | GMT 128[4] | ⊕OOO VERY LOW | IMPORTANT |

[1] Loss to follow-up not always reported. There is also a risk of confounding because other factors potentially associated with antibody response are not considered.
[2] Confidence intervals not consistently reported and studies often only reported GMC and not ranges of data.
[3] Initially enrolled participants, not clear how many were lost to follow-up.
[4] GMC 128, no CI reported. 81% seroconversion rate. No hepatitis A cases reported.

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