# Patient – Hemlibra Effect on Laboratory Monitoring Tests for Clotting

This letter contains information you requested on the effect of Hemlibra® (emicizumab-kxwh) on laboratory tests that monitor blood clotting. This letter includes studies with the strongest and most relevant data.

This information is being provided only for educational purposes and not for use in treatment decisions. You should talk with your healthcare provider for specific information and advice about your condition, your individual situation, healthcare coverage, and any current or potential treatments.

## Glossary

**Half-life:** The time needed for the body to remove half of the amount of a drug in the blood.

**Inhibitors:** In hemophilia A, inhibitors are antibodies against infused factor VIII (factor 8 or FVIII) clotting proteins. These antibodies make the infused FVIII products not effective.

**Inhibitor titer:** Inhibitor titer is the level of FVIII inhibitors measured in the blood. Inhibitors can be detected with a laboratory test and are measured in Bethesda units (BU).

**Loading dose and maintenance dose:** A loading dose is a higher dose given at the beginning of treatment to make sure that the amount of drug in the body reaches a therapeutic level before dropping down to a lower maintenance dose that will keep the amount of drug in the body at the therapeutic level.

**On-demand:** A treatment that is given as needed. For example, when bleeding occurs

**Prophylaxis:** Also known as "prophy", it is a treatment given on a regular schedule to prevent bleeds.

**Subcutaneous injection:** Injection that is given under the skin in the subcutaneous space (in the fatty layer between the skin and muscle). The medicine is then absorbed into the small vessels of the subcutaneous space and goes into the blood where it works.

## What is Hemlibra?

Hemlibra is a medicine that is approved by the Food and Drug Administration (FDA) for prophylaxis in adults and children with hemophilia A with or without FVIII inhibitors.[1]

Hemlibra is given as a loading dose of 3 mg/kg by subcutaneous injection once weekly for the first 4 weeks, followed by a maintenance dose of either 1.5 mg/kg once weekly, or 3 mg/kg once every 2 weeks, or 6 mg/kg once every 4 week.

## Hemlibra interferes with which laboratory clotting tests?

Hemlibra interferes with certain laboratory tests that measure how well your blood is clotting and may cause a false reading.[1] Hemlibra may also interfere with laboratory tests that measure FVIII activity and tests that detect FVIII inhibitors.

Table 1 includes a list of laboratory tests that are affected and unaffected by Hemlibra. The information in the table is complex and technical, and is provided to help inform you about Hemlibra and laboratory interferences. Please discuss the information with healthcare providers.

The half-life of Hemlibra is about 4 weeks.[1] If Hemlibra is stopped, the effects on these tests may last for up to 6 months because of the long half-life of Hemlibra.

**Table 1: Clotting test results affected and unaffected by Hemlibra[1]**

| Results Affected by Hemlibra | Results Unaffected by Hemlibra |
|---|---|
| Activated partial thromboplastin time (aPTT) | Bethesda assays (bovine chromogenic) for FVIII inhibitor titers |
| Bethesda assays (clotting based) for FVIII inhibitor titers | Thrombin time (TT) |
| One-stage, aPTT-based, single-factor assays | One-stage, prothrombin time (PT)-based, single-factor assays |
| aPTT-based Activate Protein C Resistance (APC-R) | Chromogenic-based single-factor assays other than FVIII* |
| Activated clotting time (ACT) | Immuno-based assays (i.e. enzyme-linked immunoassay [ELISA], turbidimetric methods) |
| | Genetic tests of coagulation factors (e.g. Factor V Leiden, Prothrombin 20210) |

* For important considerations regarding FVIII chromogenic activity assays, see *Drug Interactions* (Section 7.2) in the Prescribing Information.

## What should I discuss with my doctor about the interference of Hemlibra with laboratory tests?

Talk to your doctor about the interference of Hemlibra with these laboratory tests, and how this might affect you and your care.

Inform your other doctors, dentists, surgeons, and emergency department healthcare providers that you are being treated with Hemlibra. Tell them that Hemlibra may interfere with commonly used laboratory tests for blood clotting, measuring FVIII activity, and detecting FVIII inhibitors.

Consider updating your emergency medical information and knowing what to do if you need to go to the emergency room (ER). You may also update information on medical alert bracelets, or wallet or phone cards. Some smart phones have a “health” or “medical ID” function where you can store health information that can be accessed without unlocking your phone.

## What are the HAVEN trials that studied Hemlibra?

The HAVEN 1, HAVEN 3, and HAVEN 4 trials studied how safe and how well Hemlibra worked to prevent bleeds in adults and adolescents, 12 years or older, with hemophilia A with or without FVIII inhibitors.[1] HAVEN 2 studied how safe and how well Hemlibra worked to prevent bleeds in children <12 years old with hemophilia A with FVIII inhibitors.

## Was laboratory testing done during the HAVEN trials to monitor how Hemlibra worked?

Laboratory monitoring or testing was not used to guide Hemlibra treatment decisions during the studies.[2,3] Researchers monitored the number of bleeds people had to determine if Hemlibra worked during the studies.[1]

Adults, adolescents, and children used the same weight-based dosing of Hemlibra in the studies.[1] The levels of Hemlibra in the blood of adults and children (6 months or older) were similar with the weight-based dosing. Lower levels of Hemlibra in the blood were predicted for children less than 6 months of age.

The half-life of Hemlibra is about 4 weeks.[1] After the 4 loading doses of Hemlibra, drug levels were kept at a steady level with maintenance doses of either 1.5 mg/kg once weekly, or 3 mg/kg once every 2 weeks, or 6 mg/kg once every 4 weeks.

Drug levels of Hemlibra in the blood were not used to make treatment decisions in the studies.[2]

## Hemlibra Effect on Laboratory Monitoring Tests for Clotting References


1. HemlibraÂ® [package insert]. Genentech, Inc.; South San Francisco, CA. October 2018.
2. Protocol for HAVEN 1 Trial: A randomized, multicenter, open-label, Phase III clinical trial to evaluate the efficacy, safety, and pharmacokinetics of prophylactic RO5534262 versus no prophylaxis in hemophilia A patients with inhibitors. 2017. Available at http://www.nejm.org/doi/suppl/10.1056/NEJMoa1703068/suppl_file/nejmoa1703068_protocol.pdf. Accessed on July 18, 2017.
3. Protocol for Haven 3 Trial: Emicizumab prophylaxis in patients who have hemophilia A without inhibitors. 2018. Available at https://www.nejm.org/doi/suppl/10.1056/NEJMoa1803550/suppl_file/nejmoa1803550_protocol.pdf. Accessed on August 29, 2018.