

FACTOR IX (FIX) COMPARISON TOOL

DISCOVER

THE BENEFITS OF REBINYN®



Clayton, 34 years old, is a pilot who hikes and camps in his spare time. Clayton lives with hemophilia B.

Choosing the right
FACTOR TREATMENT
is important for you

All images of hemophilia B patients shown are for illustrative purposes only.

INDICATIONS AND USAGE

What is Rebinyn® Coagulation Factor IX (Recombinant), GlycoPEGylated?

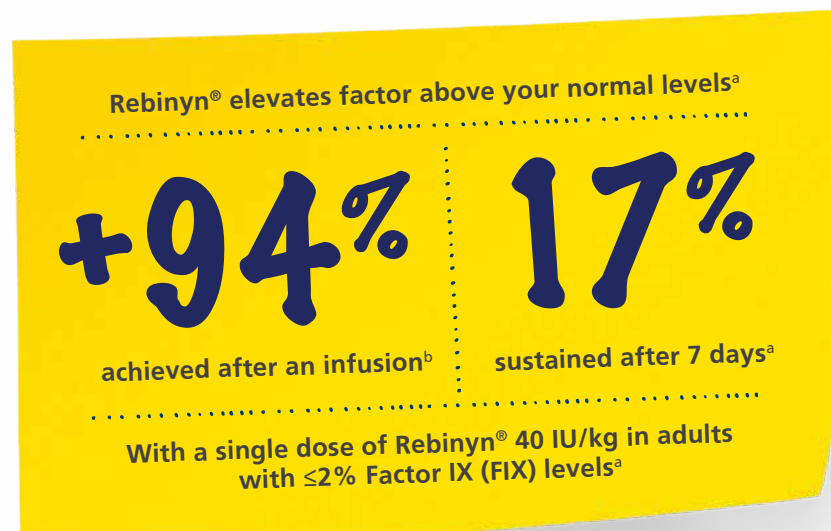
Rebinyn® is an injectable medicine used to replace clotting Factor IX that is missing in patients with hemophilia B. Rebinyn® is used to treat and control bleeding in people with hemophilia B. Your healthcare provider may give you Rebinyn® when you have surgery. Rebinyn® is not used for routine prophylaxis or for immune tolerance therapy.



Please see Important Safety Information throughout.
Please see accompanying Prescribing Information.

rebinyn®
Coagulation Factor IX
(Recombinant), GlycoPEGylated

TAKE CONTROL WITH HIGH FACTOR LEVELS



^aIn two phase 3 studies, factor levels were evaluated for 1 week after the first dose of Rebinyn® 40 IU/kg. The average levels after 7 days were 16.8% in 6 adults, 14.6% in 3 adolescents, 10.9% in 13 children ages 7 to 12 years, and 8.4% in 12 children up to age 6 years.

^bBased upon a 2.34% increase in factor levels per IU/kg infused in adults.

IMPORTANT SAFETY INFORMATION

What is the most important information I need to know about Rebinyn®?

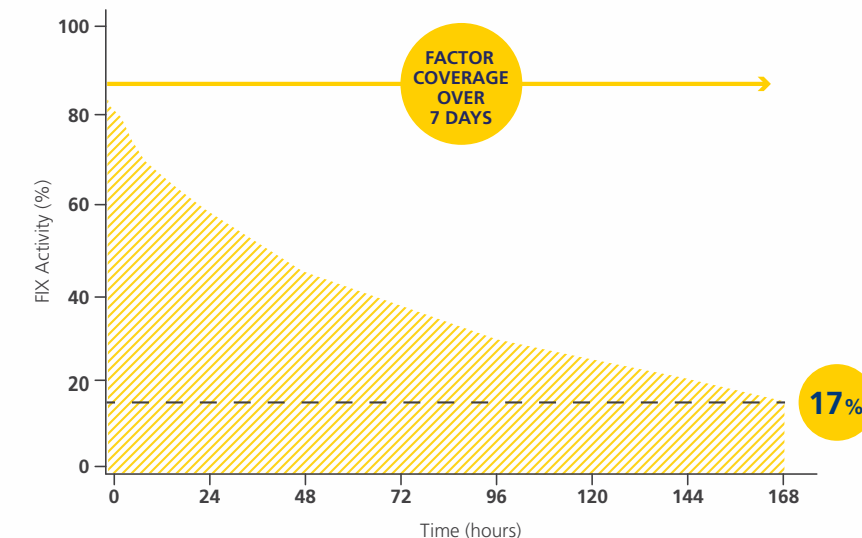
- Do not attempt to do an infusion yourself unless you have been taught how by your healthcare provider or hemophilia treatment center. Carefully follow your healthcare provider's instructions regarding the dose and schedule for infusing Rebinyn®.

Please see additional Important Safety Information throughout.

Please see accompanying Prescribing Information.

EXTENDED HALF-LIFE WITH REBINYN®

Rebinyn® achieved and maintained high factor levels^c



IMPORTANT SAFETY INFORMATION (cont'd)

Who should not use Rebinyn®?

Do not use Rebinyn® if you:

- are allergic to Factor IX or any of the other ingredients of Rebinyn®.
- are allergic to hamster proteins.

Half-life=Time taken for the level of factor in the blood to fall by 50%. Area under the curve (AUC)=A calculated determination of the factor coverage provided while factor is in the body.

^aIn two phase 3 studies, factor levels were evaluated for 1 week after the first dose of Rebinyn® 40 IU/kg. The average levels after 7 days were 16.8% in 6 adults, 14.6% in 3 adolescents, 10.9% in 13 children ages 7 to 12 years, and 8.4% in 12 children up to age 6 years.

^cBased upon a phase 3 study in 6 adult who received a single dose of Rebinyn® 40 IU/kg.

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LONGER HALF-LIFE COMPARED TO BENEFIX®

In a single-dose study, Rebinyn® achieved^a

5X LONGER HALF-LIFE



93 hours (~4 days)
with Rebinyn®

19 hours
with BeneFIX

^aBased upon a phase 1 study comparing 25, 50, and 100 IU/kg doses of Rebinyn® to a 50 IU/kg dose of standard half-life rFIX in 7 adults, and a 50 IU/kg dose of plasma-derived FIX in 8 adults. For Rebinyn®, estimated average FIX activity is adjusted to a dose of 50 IU/kg to allow comparison of all PK parameters.

- Rebinyn® is not used for routine prophylaxis or for immune tolerance therapy.
- Animals given repeat doses of Rebinyn® showed Polyethylene Glycol (PEG) inside cells lining blood vessels in the choroid plexus, which makes the fluid that cushions the brain. The potential human implications of these animal tests are unknown.

IMPORTANT SAFETY INFORMATION (cont'd)

What should I tell my health care provider before using Rebinyn®?

Tell your health care provider if you:

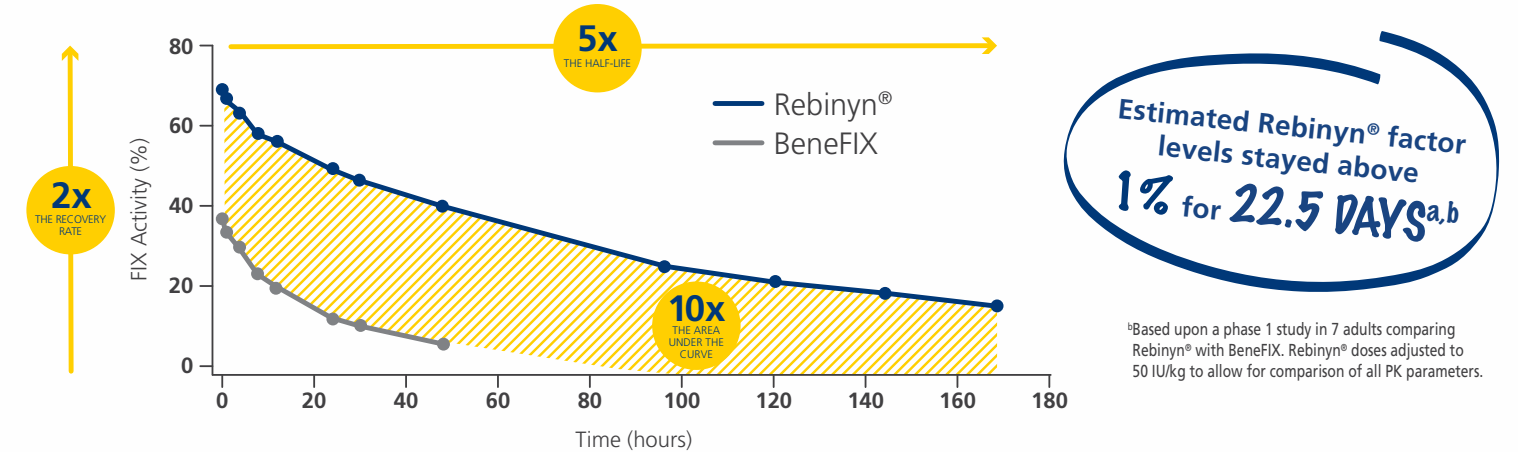
- have or have had any medical conditions.
- take any medicines, including non-prescription medicines and dietary supplements.
- are nursing, pregnant, or plan to become pregnant.
- have been told you have inhibitors to Factor IX.

Please see additional Important Safety Information throughout.
Please see accompanying Prescribing Information.



Markus, 33 years old, enjoys playing pool and spending time with his family. Markus lives with hemophilia B.

HIGHER FACTOR LEVELS FOR LONGER COMPARED TO BENEFIX^a



^aBased upon a phase 1 study in 7 adults comparing Rebinyn® with BeneFIX. Rebinyn® doses adjusted to 50 IU/kg to allow for comparison of all PK parameters.

IMPORTANT SAFETY INFORMATION (cont'd)

How should I use Rebinyn®?

- Rebinyn® is given as an infusion into the vein.
- Call your healthcare provider right away if your bleeding does not stop after taking Rebinyn®.
- Do not stop using Rebinyn® without consulting your healthcare provider.

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REBINYN® MAY REDUCE THE NEED FOR ADDITIONAL INFUSIONS^{a,b,c}

Estimated number of doses and amount of FIX per episode

		Days	0	0.5	Total Infusions	Total Dosage (IU/kg)
Mild to moderate bleed	Rebinyn®		40		1	40
	rFIX		70	40	2	110
	pdFIX		55	40	2	95

		Days	0	0.5	1	1.5	2	2.5	Total Infusions	Total Dosage (IU/kg)
Severe bleed	Rebinyn®		80						1	80
	rFIX		150	40	40	40	40	40	6	350
	pdFIX		110	40	40	40	40	40	6	310

		Days	0	0.5	1	1.5	2	2.5	3	4	5	6	7	8	9	10	11	12	13	Total Infusions	Total Dosage (IU/kg)
Surgery	Rebinyn®		80						40				40							3	160
	rFIX		150	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	17	790
	pdFIX		110	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	17	750

^aA single 40 IU/kg dose should be enough for minor and moderate bleeds. Your doctor may recommend additional doses of 40 IU/kg.
^bBased on a pharmacokinetic (PK) modeling to World Federation of Hemophilia (WFH) guidelines. Simulated results based on phase 1 PK study of Rebinyn® (n=15), recombinant FIX (rFIX) (n=7), and plasma-derived FIX (pdFIX) (n=8).
^cCompared with SHL products.

IMPORTANT SAFETY INFORMATION (cont'd)

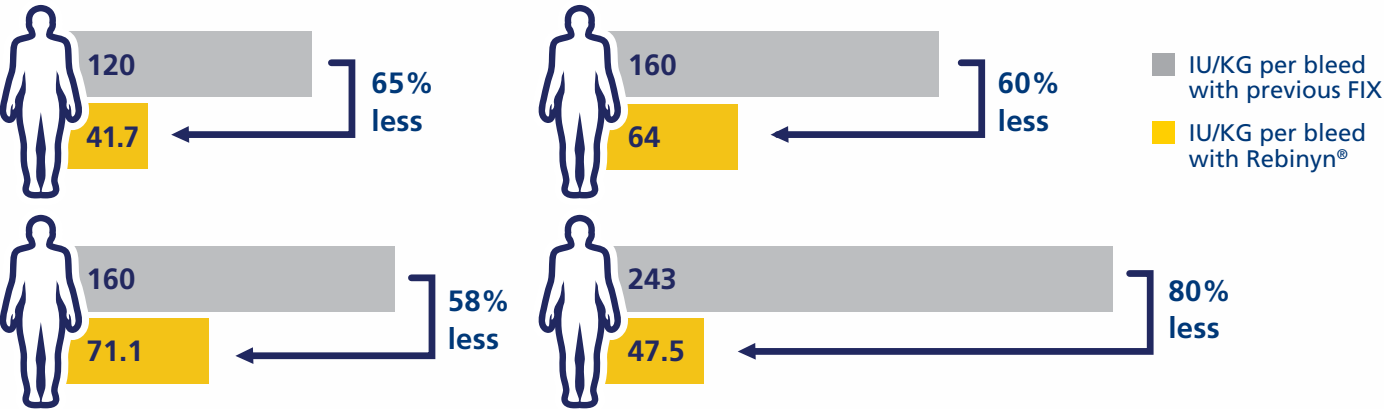
What are the possible side effects of Rebinyn®?
• Common side effects include swelling, pain, rash or redness at the location of the infusion, and itching.
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REBINYN® REDUCES THE AMOUNT OF FIX NEEDED

In a phase 3 study in previously treated adolescents and adults

- Half of the patients treated on-demand were able to resolve all bleeds with a single dose of Rebinyn®
- Of the remaining patients, those previously treated with multiple high doses^a saw a meaningful decrease in FIX use with Rebinyn®

PATIENTS PREVIOUSLY TREATING WITH MULTIPLE SHL DOSES NEEDED UP TO 80% LESS FIX^d WITH REBINYN®



^dIn a phase 3 study, the efficacy of Rebinyn® in adults/adolescents was evaluated. The on-demand arm included 15 patients; one patient had no bleeds, the other 14 patients received Rebinyn® 40 IU/kg as single dose for the treatment of bleeds. Patients received on-demand treatment for 28 weeks. 7 patients controlled all bleeds (62 bleeds) with a single 40 IU/kg dose of Rebinyn®. The remaining 7 patients (81 bleeds) required ≥2 doses to control at least one of their bleeds. Of those 7, 4 patients who were previously treated with multiple high-doses (2-3 doses of 60 IU/kg or 83 IU/kg) were able to control 71% of their bleeds with a single dose and used 58%-80% less FIX while using Rebinyn® 40 IU/kg.

GREATER FACTOR COVERAGE COMPARED TO ALPROLIX®

In a single-dose study, Rebinyn® achieved^a

4X GREATER FACTOR COVERAGE



96.6 IU x h/mL
with Rebinyn®

22.0 IU x h/mL
with Alprolix

^aBased upon a phase 1 study comparing a single 50 IU/kg dose of Rebinyn® to a single 50 IU/kg dose of extended half-life rFIXFc in 15 adults. To allow for direct comparison between products, all patients received the Alprolix standard 50 IU/kg dose; dose normalized to 50 IU/kg.

IMPORTANT SAFETY INFORMATION (cont'd)

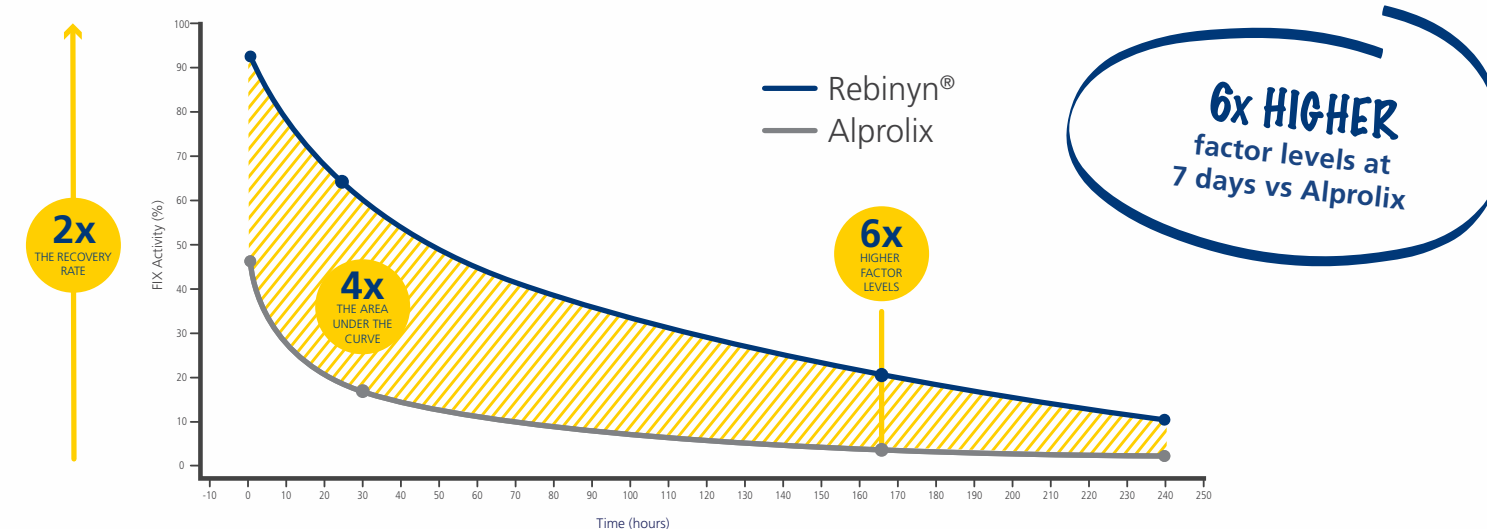
What are the possible side effects of Rebinyn®? (cont'd)

- Call your healthcare provider right away or get emergency treatment right away if you get any of the following signs of an allergic reaction: hives, chest tightness, wheezing, difficulty breathing, and/or swelling of the face.



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HIGHER FACTOR LEVELS FOR LONGER COMPARED TO ALPROLIX^a



The half-life of Rebinyn® was 103 hours vs 85 hours for Alprolix.

IMPORTANT SAFETY INFORMATION (cont'd)

What are the possible side effects of Rebinyn®? (cont'd)

- Tell your healthcare provider about any side effect that bothers you or that does not go away.

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HOW REBINYN® MEASURES UP AGAINST OTHER FIX PRODUCTS

When considering FIX treatment options, Rebinyn® may be the right fit for you.

Comparison of FIX products								
	Simplified dosing	Storage conditions			Mixing device includes prefilled diluent syringe	3 or more vial sizes	Diluent volume consistent across all vial sizes	Peel-off label for tracking infusions
		Up to 86°F	≥6 months	Up to 4 hours after reconstitution				
Rebinyn® (EHL)	✓	✓	✓	✓	✓	✓	✓	✓
BeneFIX (SHL)	Calculation required	✓	Unspecified	Up to 3 hours	✓	✓	✓	✓
Alprolix (EHL)	Calculation required	✓	✓	Up to 3 hours	✓	✓	✓	Not included
Idelvion® (EHL)	Calculation required	Up to 77°F	Unspecified	✓	Not included	✓	2 diluent volumes	✓
Ixinity® (SHL)	Calculation required	Up to 77°F	Unspecified	Up to 3 hours	✓	✓	✓	Not included
Rixubis® (SHL)	Calculation required	✓	✓	Up to 3 hours	Not included	✓	✓	✓

IMPORTANT SAFETY INFORMATION (cont'd)

What are the possible side effects of Rebinyn®? (cont'd)

- Animals given repeat doses of Rebinyn® showed Polyethylene Glycol (PEG) inside cells lining blood vessels in the choroid plexus, which makes the fluid that cushions the brain. The potential human implications of these animal tests are unknown.

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As of June 2018, Rebinyn®, BeneFIX, and Ixinity are not indicated for routine prophylaxis.
The above table does not imply that one FIX product is more effective than another product.
Data from Rebinyn® PI, 2017; Alprolix PI, 2018; Idelvion PI, 2017; BeneFIX PI, 2017; Ixinity PI, 2016; and Rixubis PI, 2016.

TAKE CONTROL TO A HIGH LEVEL

REBINYN® ACHIEVES HIGHER FACTOR LEVELS FOR LONGER

5x

longer
half-life vs
BeneFIX^a

4x

greater
factor coverage
vs Alprolix^b

2x

higher recovery vs
BeneFIX and
Alprolix^{a,b}

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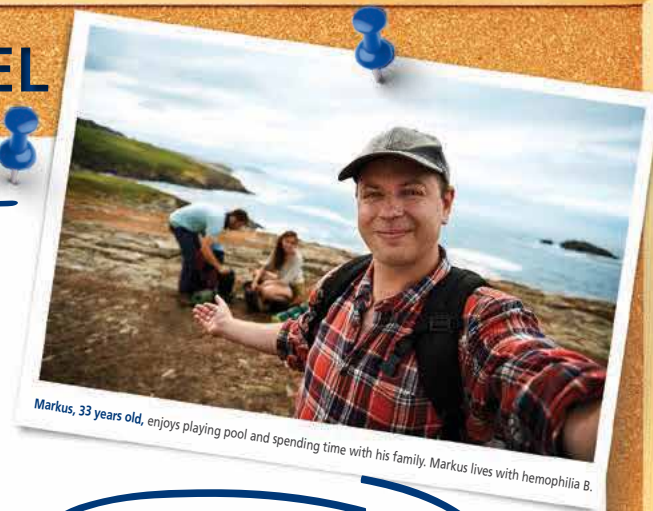
Novo Nordisk Inc., 800 Scudders Mill Road, Plainsboro, New Jersey 08536 U.S.A.

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Markus, 33 years old, enjoys playing pool and spending time with his family. Markus lives with hemophilia B.

After a single dose, Rebinyn®
maintained high factor levels at
7 days^c

^aBased upon a phase 1 study comparing 25, 50, and 100 IU/kg doses of Rebinyn® to a 50 IU/kg dose of standard half-life rFIX in 7 adults and a 50 IU/kg dose of plasma-derived FIX in 8 adults. For Rebinyn®, estimated average FIX activity is adjusted to a dose of 50 IU/kg to allow comparison of all PK parameters.

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