NovoSeven® RT
Coagulation Factor VIIa (Recombinant)

Frequently asked questions

Indications and Usage

NovoSeven® RT (coagulation Factor VIIa, recombinant) is a coagulation factor indicated for:

- Treatment of bleeding episodes and perioperative management in adults and children with hemophilia A or B with inhibitors, congenital Factor VII (FVII) deficiency, and Glanzmann's thrombasthenia with refractoriness to platelet transfusions, with or without antibodies to platelets
- Treatment of bleeding episodes and perioperative management in adults with acquired hemophilia

Important Safety Information

WARNING: THROMBOSIS

- Serious arterial and venous thrombotic events following administration of NovoSeven® RT have been reported
- Discuss the risks and explain the signs and symptoms of thrombotic and thromboembolic events to patients who will receive NovoSeven® RT
- Monitor patients for signs or symptoms of activation of the coagulation system and for thrombosis

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Frequently asked questions

Q. What is NovoSeven® RT?

A. NovoSeven® RT, Coagulation Factor VIIa (Recombinant) is a recombinant, highly purified, activated coagulation factor VIIa (rFVIIa). NovoSeven® RT is a room temperature stable, injectable medicine used for the treatment of bleeding episodes and perioperative management[1]:

- Adults and children with hemophilia A or B with inhibitors
- Adults and children with congenital Factor VII (FVII) deficiency
- Adults and children with Glanzmann's thrombasthenia with refractoriness to platelet transfusions, with or without antibodies to platelets
- Treatment of bleeding episodes and perioperative management in adults with acquired hemophilia

Q. What are the indications for NovoSeven® RT?

A. NovoSeven® RT has a broad range of indications. NovoSeven® RT, Coagulation Factor VIIa (Recombinant) is a coagulation factor indicated for[1]:

- Treatment of bleeding episodes and perioperative management in adults and children with hemophilia A or B with inhibitors, congenital Factor VII (FVII) deficiency, and Glanzmann's thrombasthenia with refractoriness to platelet transfusions, with or without antibodies to platelets
- Treatment of bleeding episodes and perioperative management in adults with acquired hemophilia

Q. What is congenital hemophilia A or B with inhibitors?

A. Congenital hemophilia is a rare genetic bleeding disorder characterized by improper clot formation.[2] The two types of hemophilia, A and B, are differentiated by a deficiency in specific coagulation factors, VIII and IX, respectively.[2] Hemophilia is classified as mild, moderate or severe based on the level of deficient coagulation factor. Inhibitors that develop in congenital hemophilia A or B are alloantibodies that develop against coagulation factors as a result of factor replacement therapy.[3] Inhibitors or antibodies develop in people with hemophilia because their immune system responds to the infused coagulation factor as a foreign protein. These antibodies neutralize or inhibit the hemostatic effect of factor replacement therapy, making it more difficult to stop a bleeding episode.[3]

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Q. What is congenital Factor VII (FVII) deficiency?

A. Congenital factor VII deficiency is a bleeding disorder that is inherited in an autosomal recessive pattern and may occur in men and women with an incidence of 1 in 500,000.[4,5] Molecular defects on chromosome 13 are the cause of congenital factor VII deficiency; however, there is a lack of correlation between gene mutation and clinical severity.[4,6] The symptoms of congenital factor VII deficiency vary from patient to patient, and some patients may not receive a diagnosis until a traumatic incident occurs. Some of the more common bleeding symptoms of congenital factor VII deficiency are mild and include hemorrhages of the skin and mucous membranes.[7,8]

Q. What is Glanzmann's thrombasthenia?

A. Glanzmann's thrombasthenia is a platelet function disorder arising from the absence or dysfunction of glycoprotein IIb/IIIa (GPIIb/IIIa).[9] It is an inherited rare bleeding disorder with an incidence of ~1 in 1 million.[10] Glanzmann's thrombasthenia affects both men and women.[9] The most common symptom of Glanzmann's thrombasthenia is epistaxis.[9]

Q. What is acquired hemophilia?

A. Acquired hemophilia is a rare, severe autoimmune bleeding disorder resulting from the production of autoantibodies typically directed against factor VIII.[11] Most patients with acquired hemophilia present with bleeding but have no personal history of bleeding.[12,13] Common patient types include older patients and postpartum women.[14] Acquired hemophilia has an incidence rate of ~1.5 patients per million per year.[13,15] The most common symptoms of acquired hemophilia are subcutaneous bleeding (purpura) and soft tissue bleeds.[11]

Q. What is the mechanism of action of NovoSeven® RT?

A. NovoSeven® RT is recombinant Factor VIIa and when complexed with other coagulation factors can lead to formation of a hemostatic plug, thereby inducing local hemostasis.[1] As a bypassing agent, NovoSeven® RT can overcome defects in the normal clotting process due to alloantibodies to FVIII and FIX, autoantibodies to FVIII, and defective platelet glycoprotein IIb/IIIa (GPIIb/IIIa); as a recombinant factor it can also be used for replacement therapy in patients with congenital factor VII deficiency.[1]

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Q. When was NovoSeven® approved?

A. In 1988, compassionate use of NovoSeven® was initiated in the United States prior to approval. NovoSeven® was FDA approved on March 25, 1999 for the indication of treatment of bleeding episodes in hemophilia A or B patients with inhibitors to Factor VIII or Factor IX.[1] In 2005, indications were expanded to include congenital FVII deficiency and surgery in both patients with congenital hemophilia with inhibitors and congenital FVII deficiency.[16] NovoSeven® was FDA approved for the indication of treatment of bleeding episodes and for the prevention of bleeding in surgical interventions or invasive procedures in patients with acquired hemophilia on October 13, 2006.[17] NovoSeven® RT was FDA approved on May 9, 2008 to include the room temperature (RT) indication.[18] On January 15, 2010, NovoSeven® RT received FDA approval to have its package insert updated to include a Black Box Warning on serious thrombotic adverse events associated with the use of NovoSeven® RT outside labeled indications.[19] In July 2014, indications were expanded to include treatment of bleeding episodes and prevention of bleeding during surgical and other procedures in patients with Glanzmann's thrombasthenia with refractoriness to platelet transfusions, with or without antibodies to platelets.[20]

Q. What are the most common adverse reactions with NovoSeven® RT?

A. The most common and serious adverse reactions in clinical trials are thrombotic events. Thrombotic adverse reactions following the administration of NovoSeven® in clinical trials occurred in 4% of patients with acquired hemophilia and 0.2% of bleeding episodes in patients with congenital hemophilia.[1]

NovoSeven® RT does not induce an anamnestic response.

Q. Can NovoSeven® RT be used with emicizumab?

A. NHF's Medical and Scientific Advisory Council (MASAC) guidelines recommend rFVIIa to treat acute bleeds in patients with congenital hemophilia A with inhibitors taking emicizumab prophylaxis.[21] During the HAVEN 1 study, NovoSeven® RT was used to treat 34 patients receiving emicizumab. No cases of thrombotic microangiopathy (TMA) or thrombotic events were observed with the use of NovoSeven® RT alone in patients receiving emicizumab prophylaxis.[22]

Q. How is NovoSeven® RT with MixPro® obtained?

A. NovoSeven® RT with MixPro® can be accessed and acquired through specialty pharmacy distributors, hemophilia home care agencies, and hemophilia treatment center 340B programs.

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Q. Who manufactures NovoSeven® RT?

A. NovoSeven® RT is manufactured by Novo Nordisk A/S. NovoSeven® RT is distributed by Novo Nordisk Inc.[1]

Q. How is NovoSeven® RT with MixPro® supplied?

A. The NovoSeven® RT with MixPro® package contains 1 single-dose vial of NovoSeven® RT, which is a room temperature stable, white, lyophilized powder and 1 pre-filled histidine diluent syringe with vial adapter.[1]

- 1 mg per vial (1000 micrograms/vial) NDC 0169-7201-01
- 2 mg per vial (2000 micrograms/vial) NDC 0169-7202-01
- 5 mg per vial (5000 micrograms/vial) NDC 0169-7205-01
- 8 mg per vial (8000 micrograms/vial) NDC 0169-7208-01

The diluent for reconstitution of NovoSeven® RT is a 10 mmol solution of L-histidine in water for injection and is supplied as a clear colorless solution; it is referred to as the histidine diluent. The histidine diluent is provided in a pre-filled glass diluent syringe in the same carton as the product vial. The vial is made of glass closed with a chlorobutyl rubber stopper not made with natural rubber latex and covered with an aluminum cap. The closed vial is equipped with a tamper-evident snap-off cap that is made of polypropylene.[1]

Q. How is NovoSeven® RT with MixPro® administered?

A. NovoSeven® RT is administered by intravenous injection only.[1] NovoSeven® RT is administered by bolus infusion or by continuous infusion for perioperative management.[1]

Q. Who can administer NovoSeven® RT with MixPro®?

A. NovoSeven® RT is administered by intravenous injection only.[1] Patients may infuse NovoSeven® RT at a hemophilia treatment center, at a health care provider's office, or at home. Patients should be trained to infuse by their health care provider prior to self-infusing.

Q. How do I store NovoSeven® RT?

A. Prior to reconstitution, store NovoSeven® RT powder and histidine diluent between 36°F to 77°F (2°C to 25°C). Do not freeze it. Store protected from light. Do not use it past the expiration date.

After reconstitution, store NovoSeven® RT either at room temperature or refrigerated for up to 3 hours. Do not freeze reconstituted NovoSeven® RT or store it in syringes.[1]

Q. What is the shelf life of NovoSeven® RT?

A. The shelf life of NovoSeven® RT is 3 years (36 months). The expiration date printed on the product must be followed.

Q. Does NovoSeven® RT contain any human components?

A. NovoSeven® RT is the only recombinant bypassing agent not made from human serum or human proteins.[1] Recombinant manufacturing minimizes the possibility of viral contamination. Additionally, NovoSeven® RT contains only rFVIIa and does not contain any FVIII or FIX.[1]

Q. What material is the pre-filled syringe made of?

A. The pre-filled syringe is made of glass to maintain the shelf life of the histidine diluent.[1]

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Warnings and Precautions

- Serious arterial and venous thrombotic events have been reported in clinical trials and postmarketing surveillance
- Patients with congenital hemophilia receiving concomitant treatment with aPCCs (activated prothrombin complex concentrates), older patients particularly with acquired hemophilia and receiving other hemostatic agents, and patients with a history of cardiac and vascular disease may have an increased risk of developing thrombotic events
- Hypersensitivity reactions, including anaphylaxis, can occur with NovoSeven® RT. Patients with a known hypersensitivity to mouse, hamster, or bovine proteins may be at a higher risk of hypersensitivity reactions. Discontinue infusion and administer appropriate treatment when hypersensitivity reactions occur
- Factor VII deficient patients should be monitored for prothrombin time (PT) and factor VII coagulant activity (FVII:C). If FVII:C fails to reach the expected level, or PT is not corrected, or bleeding is not controlled after treatment with the recommended doses, antibody formation may be suspected and analysis for antibodies should be performed
- Laboratory coagulation parameters (PT/INR, aPTT, FVII:C) have shown no direct correlation to achieving hemostasis

Adverse Reactions

- The most common and serious adverse reactions in clinical trials are thrombotic events. Thrombotic adverse reactions following the administration of NovoSeven® RT in clinical trials occurred in 4% of patients with acquired hemophilia and 0.2% of bleeding episodes in patients with congenital hemophilia

Drug Interactions

- Thrombosis may occur if NovoSeven® RT is administered concomitantly with Coagulation Factor XIII

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References: 1. NovoSeven RT [package insert]. Plainsboro, NJ: Novo Nordisk Inc; July 2020. **2.** Srivastava A, Brewer AK, Mauser-Bunschoten EP, et al. Guidelines for the management of hemophilia. *Haemophilia*. 2013;19(1):e1–47. **3.** Carcao M, Goudemand J. *Inhibitors in Hemophilia: A Primer.* 5th ed. Montréal, Québec, Canada: World Federation of Hemophilia; 2018. Published November 2018. Accessed June 12, 2019. http://www1.wfh.org/publication/files/pdf-1122.pdf. **4.** Herrmann FH, Wulff K, Auerswald G, et al. Factor VII deficiency: clinical manifestation of 717 subjects from Europe and Latin America with mutations in the factor 7 gene. *Haemophilia: the official journal of the World Federation of Hemophilia.* 2009;15(1):267-280. **5.** Peyvandi F, Cattaneo M, Inbal A, De Moerloose P, Spreafico M. Rare bleeding disorders. *Haemophilia: the official journal of the World Federation of Hemophilia.* 2008;14 Suppl 3:202-210. **6.** Mariani G, Bernardi F. Factor VII Deficiency. *Semin Thromb Hemost*. 2009;35(4):400-406. **7.** Lapecorella M, Mariani G. Factor VII deficiency: defining the clinical picture and optimizing therapeutic options. *Haemophilia: the official journal of the World Federation of Hemophilia*. 2008;14(6):1170-1175. **8.** World Federation of Hemophilia. What Are Rare Clotting Factor Deficiencies? Montréal, Québec, Canada: World Federation of Hemophilia; 2009. **9.** Kannan M, Saxena R. Glanzmann's thrombasthenia: an overview. *Clinical and applied thrombosis/hemostasis: official journal of the International Academy of Clinical and Applied Thrombosis/Hemostasis.* 2009;15(2):152-165. **10.** Di Minno G, Coppola A, Di Minno MN, Poon MC. Glanzmann's thrombasthenia (defective platelet integrin α_{IIb}-β_3): proposals for management between evidence and open issues. *Thromb Haemost.* 2009;102(6):1157-1164. **11.** Giangrande P. Acquired Hemophilia. 2012(38):1-7. Accessed March 6, 2019. http://www1.wfh.org/publications/files/pdf-1186.pdf. **12.** Huth-Kuhne A, Baudo F, Collins P, et al. International recommendations on the diagnosis and treatment of patients with acquired hemophilia A. *Haematologica*. 2009;94(4):566-575. **13.** Collins P, Baudo F, Huth-Kuhne A, et al. Consensus recommendations for the diagnosis and treatment of acquired hemophilia A. *BMC research notes*. 2010;3:161. **14.** Knoebl P, Marco P, Baudo F, et al. Demographic and clinical data in acquired hemophilia A: results from the European Acquired Haemophilia Registry (EACH2). *Journal of thrombosis and haemostasis: JTH*. 2012;10(4):622-631. **15.** Collins PW, Hirsch S, Baglin TP, et al. Acquired hemophilia A in the United Kingdom: a 2-year national surveillance study by the United Kingdom Haemophilia Centre Doctors' Organisation. *Blood.* 2007;109(5):1870-1877. **16.** Hemaware. Accessed February 19, 2019. https://hemaware.org/bleeding-disorders-z/factor-vii-deficiency. **17.** U.S. Food and Drug Administration, Office of Blood Research and Review, Center for Biologics Evaluation and Research. October 13, 2006 Approval Letter - NovoSeven. Accessed February 19, 2019. http://wayback.archive-it.org/7993/20171103054121/https://www.fda.gov/BiologicsBloodVaccines/BloodBloodProducts/ApprovedProducts/LicensedProductsBLAs/FractionatedPlasmaProducts/ucm056918.htm. **18.** U.S. Food and Drug Administration, Office of Blood Research and Review, Center for Biologics Evaluation and Research. NovoSeven® RT approval letter, May 9, 2008. Accessed February 19, 2019. http://wayback.archive-it.org/7993/20170723024324/https://www.fda.gov/BiologicsBloodVaccines/BloodBloodProducts/ApprovedProducts/LicensedProductsBLAs/FractionatedPlasmaProducts/ucm056956.html. **19.** U.S. Food and Drug Administration, Office of Blood Research and Review, Center for Biologics Evaluation and Research. January 15, 2010 Approval Letter. Accessed February 19, 2019. http://wayback.archive-it.org/7993/20170723024323/https://www.fda.gov/BiologicsBloodVaccines/BloodBloodProducts/ApprovedProducts/LicensedProductsBLAs/FractionatedPlasmaProducts/ucm201608.htm. **20.** Novo Nordisk Press Release. Accessed February 19, 2019. https://press.novonordisk-us.com/2014-07-07-FDA-Approves-NovoSeven-RT-for-the-Treatment-of-Glanzmanns-Thrombasthenia-GT-With-Refractoriness. **21.** National Hemophilia Foundation. MASAC Recommendation on the use and management of emicizumab-kxwh (Hemlibra®) for hemophilia A with and without inhibitors #268. New York, NY: National Hemophilia Foundation; 2022. Accessed September 7, 2022. **22.** Oldenburg J, Mahlangu JN, Kim B, et al. Emicizumab Prophylaxis in Hemophilia A with Inhibitors. *N Engl J Med*. 2017;377(9):809-818.

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