INDICATIONS AND USAGE

ESPEROCT® (antihemophilic factor (recombinant), glycopegylated-exei) is a coagulation Factor VIII concentrate indicated for use in adults and children with hemophilia A for:

- On-demand treatment and control of bleeding episodes
- Perioperative management of bleeding
- Routine prophylaxis to reduce the frequency of bleeding episodes

ESPEROCT® is not indicated for the treatment of von Willebrand disease.

DOSAGE AND ADMINISTRATION

For intravenous infusion after reconstitution only.

- Each vial label for ESPEROCT® states the actual Factor VIII activity in international units (IU). (2.1)
- On-demand treatment/control of bleeding episodes:
  - In adolescents / adults, 40 IU/kg body weight for minor/moderate bleeds and 50 IU/kg body weight for major bleeds; children (<12 years), 65 IU/kg body weight for minor/moderate/major bleeds. (2.1)
- Perioperative management: For minor/major surgery:
  - In adolescents / adults: pre-operative dose of 50 IU/kg body weight; in children (<12 years), pre-operative dose of 65 IU/kg body weight. Frequency of administration is determined by the treating physician. (2.1)
- Routine prophylaxis: In adolescents/adults, 50 IU/kg every 4 days; in children (<12 years), 65 IU/kg twice weekly. A regimen may be individually adjusted to less or more frequent dosing based on bleeding episodes. (2.1)
- ESPEROCT® also may be dosed to achieve a specific target Factor VIII activity level, depending on the severity of hemophilia, for on-demand treatment/control of bleeding episodes or perioperative management. To achieve a specific target Factor VIII activity level, use the following formula:
  
  Dosage (IU) = Body Weight (kg) × Desired Factor VIII Increase (IU/dL or % normal) × 0.5 (IU/kg per IU/dL). (2.1)

USE IN SPECIFIC POPULATIONS

Pediatric Use: Higher clearance (based on kg body weight), a shorter half-life and lower incremental recovery are seen in children. Higher and more frequent dosing may be needed. (8.4)

ADVERSE REACTIONS

The most frequently reported adverse reactions (≥ 1%) were rash, redness, itching and injection site reactions. (6)

To report SUSPECTED ADVERSE REACTIONS, contact Novo Nordisk Inc. at 1-800-727-6500 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

PATIENT COUNSELING INFORMATION

*Sections or subsections omitted from the full prescribing information are not listed.
FULL PRESCRIBING INFORMATION

1 INDICATIONS AND USAGE

ESPEROCT® [anhemophilic factor (recombinant), glycopegylated-exei] is a recombinant DNA-derived coagulation Factor VIII concentrate indicated for use in adults and children with hemophilia A for:

• On-demand treatment and control of bleeding episodes
• Perioperative management of bleeding
• Routine prophylaxis to reduce the frequency of bleeding episodes

Limitation of Use:

ESPEROCT® is not indicated for the treatment of von Willebrand disease. (1)

2 DOSAGE AND ADMINISTRATION

For intravenous infusion after reconstitution only.

2.1 Dose

• Dosage and duration of treatment depend on the severity of the Factor VIII deficiency, on the location and extent of bleeding, and on the patient’s clinical condition. Careful monitoring of replacement therapy is necessary in cases of major surgery or life-threatening bleeding episodes.

• Each vial of ESPEROCT® contains the labeled amount of recombinant Factor VIII in international units (IU). One IU of Factor VIII activity corresponds to the quantity of Factor VIII in one milliliter of normal human plasma. The calculation of the required dosage of Factor VIII is based on the empirical finding that one IU of Factor VIII per kg body weight raises the plasma Factor VIII activity by two IU/dL.

On-demand Treatment and Control of Bleeding Episodes

Table 1 can be used to guide dosing of ESPEROCT® for treatment of bleeding episodes.

Table 1: Dosing of ESPEROCT® to Control Bleeding Episodes

<table>
<thead>
<tr>
<th>Type of bleeding</th>
<th>Adolescents/Children &lt;12 years Dose (IU/kg)</th>
<th>Additional doses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor</td>
<td>Early hemarthrosis, mild muscle bleeding, or oral bleeding</td>
<td>40</td>
</tr>
<tr>
<td>Moderate</td>
<td>More-extensive hemarthrosis, muscle bleeding, or hematomas</td>
<td>40</td>
</tr>
<tr>
<td>Major</td>
<td>Life- or limb-threatening hemarthrosis, gastro-intestinal bleeding, intracranial, intra-abdominal or intrathoracic bleeding, fractures</td>
<td>50</td>
</tr>
</tbody>
</table>

Perioperative Management

The dose level and dosing intervals for surgery depend on the procedure and local practice. A guide for dosing with ESPEROCT® during surgery (perioperative management) is provided in Table 2 below.

Table 2: Dosing for Perioperative Management with ESPEROCT®

<table>
<thead>
<tr>
<th>Type of surgery</th>
<th>Adolescents/Children &lt;12 years Pre-operative Dose (IU/kg)</th>
<th>Additional Doses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor</td>
<td>Early hemarthrosis, mild muscle bleeding, or oral bleeding</td>
<td>50</td>
</tr>
<tr>
<td>Major</td>
<td>Infracranial, intra-abdominal, intrathoracic, or joint replacement surgery</td>
<td>50</td>
</tr>
</tbody>
</table>

Routine Prophylaxis

Adults and adolescents (≥ 12 years): The recommended starting dose is 50 IU of ESPEROCT® per kg body weight every 4 days. This regimen may be individually adjusted to less or more frequent dosing based on bleeding episodes.

Children (< 12 years): A dose of 65 IU of ESPEROCT® per kg body weight twice weekly. This regimen may be individually adjusted to less or more frequent dosing based on bleeding episodes.

• ESPEROCT® also may be dosed to achieve a specific target Factor VIII activity level, depending on the severity of hemophilia, for on-demand treatment/control of bleeding episodes or perioperative management. To achieve a specific target Factor VIII activity level, use the following formula:

\[
\text{Dose (IU) = Body Weight (kg) \times Desired Factor VIII Increase (IU/dL or % normal) \times 0.5}
\]

• Base the dose and frequency of ESPEROCT® on the individual clinical response. Patients may vary in their pharmacokinetic and clinical responses.

• If monitoring of Factor VIII activity is performed, use a chromogenic or one-stage clotting assay appropriate for use with ESPEROCT® (See Warnings and Precautions (5.3)).

2.2 Preparation and Reconstitution

• Always wash hands and ensure that the area is clean before performing the reconstitution procedures.

• Use aseptic technique during the reconstitution procedures.

• If the dose requires more than one vial of ESPEROCT® per infusion, reconstitute each vial according to the following instructions.

Overview of ESPEROCT® Package

Table of Contents

Vial with ESPEROCT® powder Vial adapter

Pre-filled syringe with diluent

Plunger rod

Overview

Reconstitution

1. Bring the ESPEROCT® vial and the pre-filled diluent syringe to room temperature.

2. Remove the plastic cap from the ESPEROCT® vial.

3. Wipe the rubber stopper on the vial with a sterile alcohol swab and allow it to dry prior to use.

4. Remove the protective paper from the vial adapter. Do not remove the vial adapter from the protective cap.

5. Place the ESPEROCT® vial on a flat and solid surface. While holding the protective cap, place the vial adapter over the ESPEROCT® vial and press down firmly on the protective cap until the vial adapter spike penetrates the rubber stopper.

6. Carefully remove the protective cap from the vial adapter.

7. Grasp the plunger rod as shown in the diagram. Attach the plunger rod to the syringe by holding the plunger rod by the wide top end. Turn the plunger rod clockwise into the rubber plunger inside the pre-filled diluent syringe until resistance is felt.

8. Break off the syringe cap from the pre-filled diluent syringe by snapping the perforation of the cap.

9. Connect the pre-filled diluent syringe to the vial adapter by turning it clockwise until it is secured.

10. Push the plunger rod to slowly inject all the diluent into the vial.

11. Without removing the syringe, gently swirl the ESPEROCT® vial until all of the powder is dissolved. Avoid shaking the vial and foaming the solution.

2.3 Administration

For intravenous infusion only.

• Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration, whenever solution and container permit. The solution should be clear and have no particles. Do not use if particulate matter or discoloration is observed.

• Do not administer ESPEROCT® in the same tubing or container with other medicinal products.

• Administer the ESPEROCT® solution immediately. If not, store the solution in the vial with the vial adapter and the syringe attached. Use ESPEROCT® within 4 hours when stored at ≤86°F (30°C) or within 24 hours when stored in a refrigerator at 36°F to 46°F (2°C to 8°C).

1. Invert the ESPEROCT® vial and slowly draw the solution into the syringe.

2. Detach the syringe from the vial adapter by turning the syringe counterclockwise.
Because clinical trials are conducted under widely varying
injection site reactions.≥1%) in clinical trials were rash, redness, itching (pruritus), and
Factor VIII inhibitors are present.

3. Attach the syringe to the luer end of an infusion needle set.
4. Infuse the reconstituted ESPEROCT® intravenously slowly
over approximately 2 minutes.
5. After infusion, safely dispose of the syringe with the infusion
set, the vial with the vial adapter, any unused ESPEROCT®,
and other waste materials.

Caution: The pre-filled diluent syringe is made of glass with
an internal tip diameter of 0.037 inches and is compatible with a
standard Luer-lock connector.

Some needleless connectors for intravenous catheters are
incompatible with the glass diluent syringes (for example, certain
connectors with an internal spike, such as Clave®/MicroClave®,
InVision-Plus®, InVision-Plus CS®, InVision-Junior®, Bionector®), and their use can damage the connector and affect
administration. To administer ESPEROCT® through incompatible
needleless connectors, withdraw the reconstituted product into a
standard 10 mL sterile Luer-lock plastic syringe.

3 DOSAGE FORMS AND STRENGTHS

The safety of ESPEROCT® has been evaluated in 270 subjects
(202 adolescents/adults and 68 children) in five prospective,
multi-center clinical trials in previously treated patients (PTPs)
with severe hemophilia A (<1% endogenous Factor VIII activity)
and no history of inhibitors. All subjects received at least one
dose of ESPEROCT®. A previously treated patient was defined as
a subject with a history of at least 150 exposure days to other Factor
VIII products (adult or pediatric subjects) or 50 exposure days to
other Factor VIII products (pediatric subjects). Total exposure
to ESPEROCT® was 80,425 exposure days corresponding to 89
patients years of treatment.

During the clinical trials in PTPs, adverse reactions occurred
at a rate of 0.10 events per patient year of exposure. The most
frequent adverse reactions were rash (5.2%), injection site
reaction (2.6%), redness (1.9%), and itching (pruritus) (1.5%).

6.2 Immunogenicity

Subjects were monitored for neutralizing and non-neutralizing
antibodies to Factor VIII, polyethylene glycol (PEG), and CHO
host cell protein. One previously treated subject developed
confirmed neutralizing antibodies to Factor VIII (13.5 Bethesda
Units). In addition, two subjects had transient low titer
Factor VIII antibodies (<10 Bethesda Units) test results at a single occasion.

Anti-PEG antibodies of no clinical consequence were detected
in 45 subjects, 32 of whom had pre-existing anti-PEG antibodies.
Nine subjects developed anti-CHO host cell protein antibodies
of no clinical consequence.

The detection of antibodies is highly dependent on the sensitivity
and assay methodology. In the assay employed, the
antisera to which the subject was exposed contain Factor VIII
by up to 60%; other reagents may overestimate
or underestimate the activity
or from the underlying
(antihemophilic factor (recombinant), glycopegylated-exei)

4.8 Pregnancy

There are no data with ESPEROCT® use in pregnant women
to determine whether there is a drug-associated risk. Animal
reproduction studies have not been conducted with ESPEROCT®.

It is unknown whether ESPEROCT® can cause fetal harm when
distributed to a pregnant woman. The effect of ESPEROCT® on
fetal development is not known. Pregnancy risk categories
are based on animal data. Animal reproduction studies
have not been conducted with ESPEROCT®.

8.3 Lactation

Risk Summary

There is no risk information regarding the presence of ESPEROCT®
in human milk, the effect on the breastfed infant, and the effects
on milk production. The developmental and health benefits
of breastfeeding should be considered along with the mother’s
clinical need for ESPEROCT® and any potential adverse effects
on the breastfed infant from ESPEROCT® or from the underlying
maternal condition.

8.4 Pediatric Use

Safety and efficacy were evaluated in 93 previously treated
pediatric patients <18 years of age, who received at least one
dose of ESPEROCT®, all received routine prophylaxis [see Clinical Studies (14)]. Thirty-four (34) of these subjects (36.6%) were
1 to <6 years of age; 34 subjects (36.6%) were 6 to <12 years of age.
Pharmacokinetic parameters were evaluated for 27 of these subjects
who were treated with ESPEROCT® [see Clinical Pharmacology (12.3)].

No difference in the safety profile of ESPEROCT® was observed
between previously treated pediatric subjects and adult
subjects. Pharmacokinetic studies in children <12 years of age
demonstrated higher clearance, a shorter half-life, and lower
incremental recovery of Factor VIII compared to adults, but
the pharmacokinetic parameters are comparable between young
children (<1–<6 years) and older children (6–<12 years). Because
clearance (per kg body weight) is higher in children (<12 years),
a higher dose and more frequent dosing may be needed in this
population [see Clinical Pharmacology (12.3)].

8.5 Geriatric Use

Clinical studies of ESPEROCT® did not include sufficient numbers
of subjects age 65 years and over to determine whether or not
they respond differently than younger subjects. Other reported clinical
experience has not identified differences in responses between
the elderly and younger patients. In general, dose selection for an
elderly patient should be cautious, usually starting at the lower end
of the recommended range, reflecting the greater frequency of decreased
hepatic, renal, or cardiac function, and of concomitant disease and other
drug therapy.

11 DESCRIPTION

ESPEROCT® is a sterile, preservative-free, non-pyrogenic
lyophilized powder for intravenous injection after reconstitution
with the provided saline diluent. The active ingredient in
ESPEROCT® is a recombinant analogue of human coagulation
Factor VIII (FVIII) conjugated with a 40-kDa polyethylene glycol
(PEG) molecule. ESPEROCT® is formulated with the following
excipients: sodium chloride, L-histidine, sucrose, polysorbate 80,
L-methionine, and calcium chloride.

FVIII activity in ESPEROCT® is determined using the chromogenic
assay described in the European Pharmacopoeia. The activity
assay for FVIII is a chromogenic assay that is traceable to
the current World Health Organization (WHO) international
standard for FVIII potency, and evaluated by appropriate
methodologies to ensure the accuracy of the results. ESPEROCT®
is formulated in single-dose vials that contain nominally 500, 1000,
1500, 2000, or 3000 IU. Each vial of ESPEROCT® is labeled with
the actual FVIII activity. After reconstitution with the
supplied diluent (0.9% saline), each mL of the solution contains
approximately 125, 250, 375, 500, or 750 IU of FVIII, respectively.

The FVIII protein in ESPEROCT® is produced in Chinese Hamster
Ovary (CHO) cells using recombinant DNA technology, and
is a glycopegylated form of recombinant antihemophilic factor A
(antihemophilic factor (recombinant), glycopegylated-exei)

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

ESPEROCT®, a glycopegylated form of recombinant
antihemophilic factor, temporarily replaces the missing
coagulation Factor VIII needed for effective hemostasis in
the blood circulation, when FVIII-PEG is activated by thrombin,
the 40-kDa PEG molecule is conjugated to a truncated B domain, which
is O-glycosylated. The polyethylene part of the molecule has a molecular mass of 166
kDa (calculated excluding post-translational modifications) and
represents a heterodimer of a heavy chain and a light chain, which
is held together by non-covalent interactions. The recombinant
FVIII molecule is also aptamers, forming a series of conformational
steps, one of which is affinity chromatography, with the use of
a monoclonal antibody to selectively isolate the rFVIII from the
cell culture medium. The 40-kDa PEG molecule is conjugated to the
O-glycan moiety of the B domain using an enzymatic reaction
production of a glycopegylated FVIII (FVIII-PEG). The purification
process includes two viral clearance steps, namely detergent
(Triton X-100) treatment for inactivation of enveloped viruses,
and 20-nm filtration for removal of enveloped and non-enveloped
viruses. The B domain particles are able to keep the manufacturing
the process and formulation of ESPEROCT®.

In the blood circulation, when FVIII-PEG is activated by thrombin,
the B-domain portion with the attached PEG moiety is cleaved off,
and the resulting activated FVIII (FVIIIa) is similar in structure and
function to native FVIII.

12.2 Pharmacodynamics

The administration of ESPEROCT® increases plasma levels of
Factor VIII and can temporarily correct the coagulation defect
in hemophilia A patients. The Factor VIII in ESPEROCT® is
conjugated to a 40-kDa polyethylene glycol molecule which
increases the half-life and decreases the clearance compared to
the non-polygulated B.

12.3 Pharmacokinetics

All pharmacokinetic studies with ESPEROCT® were conducted
in previously treated subjects with severe hemophilia A (Factor
VIII<1%). In total, 129 single-dose pharmacokinetic profiles of
ESPEROCT® were evaluated in 86 subjects (including 24 pediatric
subjects, 1–<12 years).

Table 3 shows data for subjects who each received a single dose
of 50 IU/kg ESPEROCT®. Each sample was analyzed using the one-stage
clotting assay. There was a trend of increased incremental
recovery and AUC, and decreasing clearance, with age.

ESPEROCT® [anthemophilic factor (recombinant), glycopegylated-exei] 3
Table 3: Single-dose PK parameters of ESPEROCT® 50 IU/kg, by age, using one-stage clotting assay (geometric mean (CV%))

<table>
<thead>
<tr>
<th>PK Parameter</th>
<th>1 to &lt;6 years</th>
<th>6 to &lt;12 years</th>
<th>12 to &lt;18 years</th>
<th>≥ 18 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of subjects</td>
<td>N=12</td>
<td>N=10</td>
<td>N=3</td>
<td>N=42</td>
</tr>
<tr>
<td>No. of profiles</td>
<td>12</td>
<td>10</td>
<td>5</td>
<td>78</td>
</tr>
<tr>
<td>IR (IU/dL per IU/kg)*</td>
<td>1.82 (32)</td>
<td>1.67 (22)</td>
<td>2.45 (16)</td>
<td>2.53 (24)</td>
</tr>
<tr>
<td>FVIII recovery (IU/dL)*</td>
<td>103.2 (27)</td>
<td>98.7 (18)</td>
<td>117.7 (14)</td>
<td>130.4 (26)</td>
</tr>
<tr>
<td>t1/2 (hours)</td>
<td>14.7 (27)</td>
<td>13.8 (32)</td>
<td>17.4 (39)</td>
<td>21.7 (33)</td>
</tr>
<tr>
<td>AUC∞ (IU.hour/dL)</td>
<td>2305 (42)</td>
<td>2197 (38)</td>
<td>3063 (40)</td>
<td>4110 (38)</td>
</tr>
<tr>
<td>CL (mL/hour/kg)</td>
<td>2.4 (42)</td>
<td>2.7 (42)</td>
<td>1.6 (39)</td>
<td>1.2 (34)</td>
</tr>
<tr>
<td>Vss (mL/kg)</td>
<td>44.2 (25)</td>
<td>47.3 (28)</td>
<td>36.4 (12)</td>
<td>37.3 (26)</td>
</tr>
<tr>
<td>MRT (hours)</td>
<td>18.1 (27)</td>
<td>17.8 (35)</td>
<td>23.4 (43)</td>
<td>27.4 (28)*</td>
</tr>
</tbody>
</table>

*PK parameters are presented in geometric mean.

Abbreviations: IR = Incremental recovery; t1/2 = terminal half-life; AUC = area under the FVIII activity time profile; CL = clearance; Vss = volume of distribution at steady-state; MRT = mean residence time; CV% = coefficient of variation.

Table 4: Steady-state trough and peak plasma FVIII activity by age and dose regimen, chromogenic assay (geometric mean (95% CI))

<table>
<thead>
<tr>
<th>Dose Regimen</th>
<th>60 IU/kg twice weekly**</th>
<th>50–75 IU/kg</th>
<th>75 IU/kg Q7D*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age range</td>
<td>6–&lt;12 years</td>
<td>12–18 years</td>
<td>≥ 18 years</td>
</tr>
<tr>
<td>No. of profiles</td>
<td>N=31</td>
<td>N=34</td>
<td>N=6</td>
</tr>
<tr>
<td>No. of patients</td>
<td>N=64</td>
<td>N=93</td>
<td>N=65</td>
</tr>
<tr>
<td>Trough, IU/dL</td>
<td>1.2 (0.8, 1.6)</td>
<td>2.0 (1.5, 2.7)</td>
<td>3.0 (2.6, 3.5)</td>
</tr>
<tr>
<td>Peak, IU/dL</td>
<td>125.0 (118.7, 131.6)</td>
<td>143.3 (136.8, 150.2)</td>
<td>137.9 (133.9, 142.2)</td>
</tr>
</tbody>
</table>

**Data included in analysis: adolescent/adult Main Phase until 6 months after the Main Phase.

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13.2 Animal Toxicology and/or Pharmacology

No adverse effects were observed in immune-deficient rats intravenously injected with ESPEROCT® (50-1200 IU/kg/ injection), once every 4th day for 52 weeks. No evidence of polyethylene glycol accumulation was detected by immunohistochemical staining of brain tissue, including the choroid plexus.

14 CLINICAL STUDIES

The safety and efficacy of ESPEROCT® have been evaluated in five multinational, open-label trials in male subjects with severe hemophilia A (<1% endogenous Factor VIII activity). One trial was subsequently partially randomized to evaluate two different prophylaxis regimens. All subjects were previously treated, which was defined as having received other Factor VIII products for ≤50 exposure days for adolescents and adults, and ≤50 exposure days for pediatric subjects. The key exclusion criteria across trials included known or suspected hypersensitivity to trial or related products and known history of Factor VIII inhibitors or current inhibitor ≥0.6 Bethesda units (BU).

The efficacy evaluation included 254 subjects, who received at least one dose of ESPEROCT® in the following trials:

- Adolescent/adult trial: This trial included 186 subjects, 161 adults (18 to 65 years old) and 25 adolescents (12 to <18 years old). It consisted of a Main Phase and optional Extension Phase. During the Main Phase, 175 subjects received the prophylaxis regimen which consisted of 50 IU/kg every 4 days (Q4D), while 12 adults chose to treat on-demand. (One subject changed from on-demand to prophylaxis and is counted in both groups.) Thirteen (7%) of 175 adults in the prophylaxis arm modified their dosing regimen to Q3-4D dosing for ease of use. All subjects received at least one dose of ESPEROCT® and are evaluable for safety and efficacy. A total of 165 subjects (95%) completed the Main Phase.

- Extension: This extension compared two dose regimens: 75 IU/kg every 7 days (Q7D) and 50 IU/kg Q4D. The randomization was open to subjects who experienced 2 or fewer bleeds during the last 6 months in the Main Phase.

- Pediatric trial: This trial included 68 subjects who were evenly divided with 34 in each age group, 0–6 and 6–<12 years of age. All subjects received the same prophylaxis regimen of approximately 65 IU/kg (50–75 IU/kg) twice weekly. A total of 63 subjects (93%) completed the Main Phase.

- Surgery trial: In the surgery trial, 33 previously treated adolescents/adults underwent 45 major surgeries. The dose level of ESPEROCT® was chosen so that FVIII activity at least as recommended by World Federation of Hemophilia (WFH) guidelines was targeted. All subjects returned to the adolescent/adult trial after the surgery trial assessments were completed.

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Table 5: Summary of efficacy in control of bleeding episodes by age

<table>
<thead>
<tr>
<th>Age range</th>
<th># of subjects</th>
<th>&lt;6 years</th>
<th>6–&lt;12 years</th>
<th>≥ 12 years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of bleeds</td>
<td>30</td>
<td>34</td>
<td>122</td>
<td>118</td>
<td>260</td>
</tr>
<tr>
<td>No. of injections</td>
<td>1–2</td>
<td>23.3%</td>
<td>17.5%</td>
<td>11.6%</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

**Definition of Hemostatic Response:**
Excellent: Abrupt pain relief and/or unequivocal improvement in objective signs of bleeding within approximately 8 hours after a single injection.
Good: Definite pain relief and/or improvement in signs of bleeding within approximately 8 hours after one injection, but possibly requiring more than one injection for complete resolution.
Moderate: Probable or slight beneficial effect within approximately 8 hours after the first injection, usually requiring more than one injection.

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13 NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

Carcinogenesis, mutagenesis, and impairment of fertility studies in animals have not been performed.

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14.1 Animal Toxicology

No adverse effects were observed in immune-deficient rats intravenously injected with ESPEROCT® (50-1200 IU/kg/ injection), once every 4th day for 52 weeks. No evidence of polyethylene glycol accumulation was detected by immunohistochemical staining of brain tissue, including the choroid plexus.

14.2 Pharmacology

The efficacy evaluation included 254 subjects, who received at least one dose of ESPEROCT® in the following trials:

- Adolescent/adult trial: This trial included 186 subjects, 161 adults (18 to 65 years old) and 25 adolescents (12 to <18 years old). It consisted of a Main Phase and optional Extension Phase. During the Main Phase, 175 subjects received the prophylaxis regimen which consisted of 50 IU/kg every 4 days (Q4D), while 12 adults chose to treat on-demand. (One subject changed from on-demand to prophylaxis and is counted in both groups.) Thirteen (7%) of 175 adults in the prophylaxis arm modified their dosing regimen to Q3-4D dosing for ease of use. All subjects received at least one dose of ESPEROCT® and are evaluable for safety and efficacy. A total of 165 subjects (95%) completed the Main Phase.

- Extension: This extension compared two dose regimens: 75 IU/kg every 7 days (Q7D) and 50 IU/kg Q4D. The randomization was open to subjects who experienced 2 or fewer bleeds during the last 6 months in the Main Phase.

- Pediatric trial: This trial included 68 subjects who were evenly divided with 34 in each age group, 0–6 and 6–<12 years of age. All subjects received the same prophylaxis regimen of approximately 65 IU/kg (50–75 IU/kg) twice weekly. A total of 63 subjects (93%) completed the Main Phase.

- Surgery trial: In the surgery trial, 33 previously treated adolescents/adults underwent 45 major surgeries. The dose level of ESPEROCT® was chosen so that FVIII activity at least as recommended by World Federation of Hemophilia (WFH) guidelines was targeted. All subjects returned to the adolescent/adult trial after the surgery trial assessments were completed.

On-demand Treatment and Control of Bleeding Episodes

There were 1506 bleeds reported in 171 of 254 subjects across the completed clinical trials, and the most common bleed types were joint (65.2%), muscle (14.5%), and subcutaneous (8.9%). Table 6 summarizes the efficacy in control of bleeding episodes by age.

Doses used for treatment of bleeding episodes depended on age, treatment regimen, and the severity of the bleed.

Of the 1407 mild and moderate bleeding episodes in all subjects in the adolescent/adult study, the median dose used was 42 IU/kg. For subjects who were on the on-demand arm the median initial dose was 28 IU/kg and 88.4% of the bleeds were treated successfully with a single dose. In subjects receiving routine prophylaxis, the median initial dose was 52 IU/kg, and 76.4% of the bleeds were successfully treated with a single injection. The 15 severe bleeds, 12 (80%) required more than one dose with a total median dose of 111 IU/kg.

In the pediatric study, 70 mild/moderate bleeds in children < 12 years old receiving routine prophylaxis were treated with a median initial dose of 64 IU/kg per injection, with 63% treated with a single injection. When needed, additional median doses of 62 IU/kg were used at approximately 24 hour intervals. The median total dose was 70 IU/kg per bleed.
Routine Prophylaxis in Adolescents/Adults

The efficacy of ESPEROCT® in routine prophylaxis with Q4D dosing was demonstrated for the adult/adolescent population (see Table 7). In the extension part of the study, treatment success of the Q7D arm was not established. During the Main Phase of the adolescent/adult trial, 186 subjects had a total of 159 exposure years. The median annualized bleeding rate (ABR) for treated bleeds in adults and adolescents treated every 4 days was 1.2 (IQR: 0.4; 4.3), and mean ABR was 3.0 (SD: 4.7). When including all bleeds (treated and non-treated), the median ABR was 2.5 (Q1: 0.0; 4.7) and the mean ABR was 3.3 (SD: 4.9).

Table 7: Efficacy in adolescent/adult prophylaxis, median and mean ABRs by age, treatment regimen, and bleed type

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Prophylaxis</th>
<th>On-demand</th>
</tr>
</thead>
<tbody>
<tr>
<td># of subjects</td>
<td>34</td>
<td>68</td>
</tr>
<tr>
<td>Mean treatment duration (years)</td>
<td>0.85</td>
<td>1.2</td>
</tr>
<tr>
<td># of bleeds</td>
<td>12.0 (9.4)</td>
<td>1.0 (0.0)</td>
</tr>
<tr>
<td>Median ABR (IQR)</td>
<td>2.2 (0.0;3.7)</td>
<td>0.0 (0.0;1.4)</td>
</tr>
<tr>
<td>Mean ABR (SD)</td>
<td>3.5 (3.9)</td>
<td>0.0 (0.0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>All bleeds (treated and untreated)</th>
</tr>
</thead>
<tbody>
<tr>
<td># of subjects with bleeds (%)</td>
</tr>
<tr>
<td># of subjects without bleeds (%)</td>
</tr>
<tr>
<td>Median ABR (IQR)</td>
</tr>
<tr>
<td>Mean ABR (SD)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adolescent population</th>
</tr>
</thead>
<tbody>
<tr>
<td># of bleeds</td>
</tr>
<tr>
<td>Median ABR (IQR)</td>
</tr>
<tr>
<td>Mean ABR (SD)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pediatric Prophylaxis Regimen</th>
</tr>
</thead>
<tbody>
<tr>
<td># of subjects</td>
</tr>
<tr>
<td>Mean treatment duration (years)</td>
</tr>
<tr>
<td># of bleeds</td>
</tr>
<tr>
<td>Median ABR (IQR)</td>
</tr>
<tr>
<td>Mean ABR (SD)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>All bleeds (treated and untreated)</th>
</tr>
</thead>
<tbody>
<tr>
<td># of subjects with bleeds (%)</td>
</tr>
<tr>
<td># of subjects without bleeds (%)</td>
</tr>
<tr>
<td>Median ABR (IQR)</td>
</tr>
<tr>
<td>Mean ABR (SD)</td>
</tr>
</tbody>
</table>

Routine Prophylaxis in Children <12 Years of Age

Overall, 68 children below 12 years received prophylactic treatment with ESPEROCT at an average dose of approximately 65 IU/kg twice weekly. The prophylactic effect of ESPEROCT was demonstrated with a median ABR rate of 2.0 (IQR: 0.0; 2.8) and 2.0 (IQR: 0.0; 4.2) for treated bleeds and all bleeds respectively (see Table 8). The mean ABR (SD) for treated bleeds and all bleeds were 3.1 (7.1) and 4.4 (8.7), respectively. Of the 68 children, 22 (32%) did not experience any bleeding episodes and 29 (43%) did not experience any bleeding episodes that required treatment during the Main Phase of the trial. Of the 13 subjects with 17 documented target joints at baseline, 10 subjects (77%) and 14 target joints (82%) did not have any bleeds during the Main Phase of the trial.

Table 8: Efficacy in pediatric prophylaxis, median and mean ABR by age and bleed type

<table>
<thead>
<tr>
<th>Age Range</th>
<th>&lt;6 years**</th>
<th>6 to &lt;12 years</th>
<th>0 to &lt;12 years</th>
</tr>
</thead>
<tbody>
<tr>
<td># of subjects</td>
<td>N=34</td>
<td>N=34</td>
<td>N=68</td>
</tr>
<tr>
<td>Mean treatment duration (years)</td>
<td>0.46</td>
<td>0.51</td>
<td>0.48</td>
</tr>
<tr>
<td># of bleeds</td>
<td>19 (56)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median ABR (IQR)</td>
<td>1.9 (0.0;2.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean ABR (SD)</td>
<td>3.9 (9.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td># of bleeds</td>
<td>6 (18)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median ABR (IQR)</td>
<td>0.0 (0.0;0.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean ABR (SD)</td>
<td>2.1 (7.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td># of bleeds</td>
<td>5 (15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median ABR (IQR)</td>
<td>0.0 (0.0;0.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean ABR (SD)</td>
<td>2.2 (1.6)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Reflects all bleeds reported by patients including those where no ESPEROCT® was administered

**Elevated mean ABRs are due to subjects who withdrew from the study, whose bleeding rates were extrapolated to one year
16 HOW SUPPLIED/STORAGE AND HANDLING

How Supplied

- ESPEROCT® is supplied in packages comprised of a single-dose vial containing nominally 500, 1000, 1500, 2000 or 3000 IU of Factor VIII activity; a MixPro® pre-filled diluent syringe containing 0.9% saline solution; and a sterile vial adapter with a 25-micrometer filter, which serves as a needleless reconstitution device.

- The actual Factor VIII activity in IU is stated on each ESPEROCT® carton and vial label.

### Table 9: ESPEROCT® Presentations

<table>
<thead>
<tr>
<th>Nominal Dosage Strength</th>
<th>Cap Color</th>
<th>Carton NDC Number</th>
<th>Components</th>
</tr>
</thead>
</table>
| 500 IU                  | Red       | NDC 0169 8500 01  | • ESPEROCT® in single-dose vial [NDC 0169 8501 11]  
  • Pre-filled syringe with 4 mL sterile saline diluent [NDC 0169 8008 98]  
  • Vial adapter |
| 1000 IU                 | Green     | NDC 0169 8100 01 | • ESPEROCT® in single-dose vial [NDC 0169 8101 11]  
  • Pre-filled syringes with 4 mL sterile saline diluent [NDC 0169 8008 98]  
  • Vial adapter |
| 1500 IU                 | Gray      | NDC 0169 8150 01 | • ESPEROCT® in single-dose vial [NDC 0169 8151 11]  
  • Pre-filled syringes with 4 mL sterile saline diluent [NDC 0169 8008 98]  
  • Vial adapter |
| 2000 IU                 | Yellow    | NDC 0169 8200 01 | • ESPEROCT® in single-dose vial [NDC 0169 8201 11]  
  • Pre-filled syringes with 4 mL sterile saline diluent [NDC 0169 8008 98]  
  • Vial adapter |
| 3000 IU                 | Black     | NDC 0169 8300 01 | • ESPEROCT® in single-dose vial [NDC 0169 8301 11]  
  • Pre-filled syringes with 4 mL sterile saline diluent [NDC 0169 8008 98]  
  • Vial adapter |

IU = International Units

- The ESPEROCT® vials are made of glass, closed with a chlorobutyl rubber stopper (not made with natural rubber latex), and sealed with an aluminum cap.
- The pre-filled diluent syringes are made of glass with a siliconized bromobutyl rubber plunger (not made with rubber latex).
- The closed vials and pre-filled diluent syringes are equipped with a tamper-evident snap-off cap which is made of polypropylene.

Storage and Handling

- Store ESPEROCT® in the original package to protect the ESPEROCT® vial from light.
- Store ESPEROCT® in a powder form under refrigeration at 36°F to 46°F (2°C to 8°C) for up to 30 months from the date of manufacture until the expiration date stated on the label. During the 30-month shelf life, ESPEROCT® may be kept at room temperature:
  - up to 86°F (30°C) for no longer than 12 months, or
  - up to 104°F (40°C) for no longer than 3 months
- Record the date on the carton when the product was removed from the refrigerator. Do not return the product to the refrigerator.
- Do not freeze ESPEROCT®.
- Use ESPEROCT® within 4 hours after reconstitution when stored at ≤86°F (30°C) or within 24 hours when stored in the refrigerator. Store the reconstituted product in the vial.
- Discard any unused reconstituted product.

17 PATIENT COUNSELING INFORMATION

Advise patients:

- To read the FDA-approved patient labeling (Patient Information and Instructions for Use).
- That allergic-type hypersensitivity reactions or anaphylaxis are possible with use of ESPEROCT®. Inform patients of the early signs of hypersensitivity reactions including rash, hives, itching, facial swelling, tightness of the chest, and wheezing. Advise patients to discontinue use of ESPEROCT® immediately and contact their healthcare provider and/or seek emergency care promptly if these symptoms occur.
- To contact their healthcare provider or treatment facility for further treatment and/or assessment if they experience a lack of a clinical response to Factor VIII replacement therapy, as this may be a manifestation of an inhibitor.

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Piscataway, NJ 08853-6500
1-800-727-6500
Manufactured by:
Novo Nordisk A/S
Novo Allé, DK-2880 Bagsvaerd
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US22ESP00046 September 2022
Patient Information

ESPEROCT® [antihemophilic factor (recombinant), glycopegylated-exei]

Read the Patient Information and the Instructions For Use that come with ESPEROCT® before you start taking this medicine and each time you get a refill. There may be new information.

This Patient Information does not take the place of talking with your healthcare provider about your medical condition or treatment. If you have questions about ESPEROCT® after reading this information, ask your healthcare provider.

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

Do not attempt to do an infusion yourself unless you have been taught how by your healthcare provider or hemophilia treatment center.

You must carefully follow your healthcare provider’s instructions regarding the dose and schedule for infusing ESPEROCT® so that your treatment will work best for you.

What is ESPEROCT®?

ESPEROCT® is an injectable medicine used to replace clotting Factor VIII that is missing in patients with hemophilia A. Hemophilia A is an inherited bleeding disorder in all age groups that prevents blood from clotting normally.

ESPEROCT® is used to treat and prevent or reduce the number of bleeding episodes in people with hemophilia A.

Your healthcare provider may give you ESPEROCT® when you have surgery.

Who should not use ESPEROCT®?

You should not use ESPEROCT® if you:

• Are allergic to Factor VIII or any of the other ingredients of ESPEROCT®.
• Are allergic to hamster proteins.

If you are not sure, talk to your healthcare provider before using this medicine.

Tell your healthcare provider if you are pregnant or nursing because ESPEROCT® might not be right for you.

What should I tell my healthcare provider before I use ESPEROCT®?

You should tell your healthcare provider if you:

• Have or have had any medical conditions.
• Take any medicines, including non-prescription medicines and dietary supplements.
• Are nursing.
• Are pregnant or planning to become pregnant.
• Have been told that you have inhibitors to Factor VIII.

How should I use ESPEROCT®?

Treatment with ESPEROCT® should be started by a healthcare provider who is experienced in the care of patients with hemophilia A.

ESPEROCT® is given as an infusion into the vein.

You may infuse ESPEROCT® at a hemophilia treatment center, at your healthcare provider’s office or in your home. You should be trained on how to do infusions by your hemophilia treatment center or healthcare provider. Many people with hemophilia A learn to infuse the medicine by themselves or with the help of a family member.

Your healthcare provider will tell you how much ESPEROCT® to use based on your weight, the severity of your hemophilia A, and where you are bleeding. Your dose will be calculated in international units, IU.

Call your healthcare provider right away if your bleeding does not stop after taking ESPEROCT®.

If your bleeding is not adequately controlled, it could be due to the development of Factor VIII inhibitors. This should be checked by your healthcare provider. You might need a higher dose of ESPEROCT® or even a different product to control bleeding.

Do not increase the total dose of ESPEROCT® to control your bleeding without consulting your healthcare provider.

Use in children

ESPEROCT® can be used in children. Your healthcare provider will decide the dose of ESPEROCT® you will receive.

If you forget to use ESPEROCT®

If you forget a dose, infuse the missed dose when you discover the mistake. Do not infuse a double dose to make up for a forgotten dose. Proceed with the next infusions as scheduled and continue as advised by your healthcare provider.

If you stop using ESPEROCT®

Do not stop using ESPEROCT® without consulting your healthcare provider.

If you have any further questions on the use of this product, ask your healthcare provider.

What if I take too much ESPEROCT®?

Always take ESPEROCT® exactly as your healthcare provider has told you. You should check with your healthcare provider if you are not sure. If you infuse more ESPEROCT® than recommended, tell your healthcare provider as soon as possible.

What are the possible side effects of ESPEROCT®?

Common Side Effects Include:

• Rash or itching
• Swelling, pain, rash or redness at the location of infusion

Other Possible Side Effects:

You could have an allergic reaction to coagulation Factor VIII products. Call your healthcare provider right away or get emergency treatment right away if you get any signs of an allergic reaction, such as: hives, chest tightness, wheezing, dizziness, difficulty breathing, and/or swelling of the face.

Your body can also make antibodies called “inhibitors” against ESPEROCT®, which may stop ESPEROCT® from working properly. Your healthcare provider may need to test your blood for inhibitors from time to time.

These are not all of the possible side effects from ESPEROCT®. Ask your healthcare provider for more information. You are encouraged to report side effects to FDA at 1-800-FDA-1088. Tell your healthcare provider about any side effect that bothers you or that does not go away.

What are the ESPEROCT® dosage strengths?

ESPEROCT® comes in five different dosage strengths. The actual number of international units (IU) of Factor VIII in the vial will be imprinted on the label and on the box. The five different strengths are as follows:

<table>
<thead>
<tr>
<th>Cap Color Indicator</th>
<th>Nominal Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>500 IU per vial</td>
</tr>
<tr>
<td>Green</td>
<td>1000 IU per vial</td>
</tr>
<tr>
<td>Gray</td>
<td>1500 IU per vial</td>
</tr>
<tr>
<td>Yellow</td>
<td>2000 IU per vial</td>
</tr>
<tr>
<td>Black</td>
<td>3000 IU per vial</td>
</tr>
</tbody>
</table>

Always check the actual dosage strength printed on the label to make sure you are using the strength prescribed by your healthcare provider.

How should I store ESPEROCT®?

Prior to Reconstitution (mixing the dry powder in the vial with the diluent):

Protect from light. Do not freeze ESPEROCT®.

ESPEROCT® can be stored in refrigeration at 36°F to 46°F (2°C to 8°C) for up to 30 months until the expiration date stated on the label. During the 30 month shelf life, ESPEROCT® may be kept at room temperature (not to exceed 86°F/30°C) for up to 12 months, or up to 104°F (40°C) for no longer than 3 months.

If you choose to store ESPEROCT® at room temperature:

• Record the date when the product was removed from the refrigerator.
• Do not return the product to the refrigerator.
• Do not use after 12 months if stored up to 86°F (30°C) or after 3 months if stored up to 104°F (40°C) or the expiration date listed on the vial, whichever is earlier.

Do not use this medicine after the expiration date which is on the outer carton and the vial. The expiration date refers to the last day of that month.

After Reconstitution:

The reconstituted (the final product once the powder is mixed with the diluent) ESPEROCT® should appear clear and colorless without visible particles.

The reconstituted ESPEROCT® should be used immediately. If you cannot use the reconstituted ESPEROCT® immediately, it must be used within 4 hours when stored at or below 86°F (30°C) or within 24 hours when stored in a refrigerator at 36°F to 46°F (2°C to 8°C). Store the reconstituted product in the vial.

Keep this medicine out of the sight and out of reach of children.

What else should I know about ESPEROCT® and hemophilia A?

Medicines are sometimes prescribed for purposes other than those listed here. Do not use ESPEROCT® for a condition for which it is not prescribed. Do not share ESPEROCT® with other people, even if they have the same symptoms that you have.

For more information about ESPEROCT®, please call Novo Nordisk at 1-800-727-6500.
**Instructions for Use**

**Instructions on how to use ESPEROCT® [antihemophilic factor (recombinant), glycopegylated-exei] MixPro®**

**READ THESE INSTRUCTIONS CAREFULLY BEFORE USING ESPEROCT®.**

ESPEROCT® is supplied as a powder. Before infusion (administration) it must be mixed (reconstituted) with the liquid diluent supplied in the syringe. The liquid diluent is a sodium chloride solution. The mixed ESPEROCT™ must be infused into your vein (intravenous infusion). The equipment in this package is designed to mix and infuse ESPEROCT®.

You will also need an infusion set (butterfly needle with tubing), sterile alcohol swabs, gauze pads, and bandages.

**Do not use the equipment without proper training from your doctor or nurse.**

Always wash your hands and ensure that the area around you is clean.

When you prepare and infuse medication directly into the veins, it is important to use a clean and germ free (aseptic) technique. Improper technique can introduce germs that can infect the blood.

**Don’t open the equipment until you are ready to use it.**

**Don’t use the equipment if it has been dropped, or if it is damaged. Use a new package instead.**

**Don’t use the equipment if it is expired. Use a new package instead.**

The expiration date is printed on the outer carton and on the vial, the vial adapter and the pre-filled syringe.

**Don’t open the equipment until you are ready to use it.**

**Don’t use the equipment if it has been dropped, or if it is damaged. Use a new package instead.**

**Don’t dispose of any of the items until after you have infused the mixed solution.**

The equipment is for single use only.


---

**Content**

The package contains:

- Vial with ESPEROCT® powder
- Vial adapter
- Pre-filled syringe with diluent
- Plunger rod (placed under the syringe)

---

**Overview**

<table>
<thead>
<tr>
<th>Vial with ESPEROCT® powder</th>
<th>Vial adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic cap</td>
<td>Rubber stopper (under plastic cap)</td>
</tr>
<tr>
<td>Ruber stopper</td>
<td>Protective cap</td>
</tr>
<tr>
<td>Pre-filled syringe with diluent</td>
<td>Spike (under protective paper)</td>
</tr>
<tr>
<td>Syringe tip</td>
<td>Protective paper</td>
</tr>
<tr>
<td>(under syringe cap)</td>
<td>Wide top end</td>
</tr>
<tr>
<td>Rubber plunger</td>
<td>Thread</td>
</tr>
<tr>
<td>Scale</td>
<td></td>
</tr>
</tbody>
</table>

---

**1. Prepare the vial and the syringe**

- Take out the number of ESPEROCT® packages you need.
- Check the expiry date.
- Check the name, strength and color of the package, to make sure it contains the correct product.
- Wash your hands and dry them properly using a clean towel or air dry.
- Take the vial, the vial adapter and the pre-filled syringe out of the carton. Leave the plunger rod untouched in the carton.
- Bring the vial and the pre-filled syringe to room temperature. You can do this by holding them in your hands until they feel as warm as your hands.

**2. Attach the vial adapter**

- Remove the plastic cap from the vial. If the plastic cap is loose or missing, don’t use the vial.
- Wipe the rubber stopper with a sterile alcohol swab and allow it to air dry for a few seconds before use to ensure that it is as germ free as possible.
- Don’t touch the rubber stopper with your fingers as this can transfer germs.

- Place the vial on a flat and solid surface.
- Turn over the protective cap, and snap the vial adapter onto the vial. Once attached, don’t remove the vial adapter from the vial.

   **Carefully remove the protective cap from the vial adapter. Don’t lift the vial adapter from the vial when removing the protective cap.**

**3. Attach the plunger rod and the syringe**

- Grasp the plunger rod by the wide top end and take it out of the carton. Don’t touch the sides or the thread of the plunger rod. If you touch the sides or the thread germs from your fingers can be transferred.
- Immediately connect the plunger rod to the syringe by turning it clockwise into the rubber plunger inside the pre-filled syringe until resistance is felt.

**4. Mix the powder with the diluent**

- Hold the pre-filled syringe slightly tilted with the vial pointing downwards.
- Push the plunger rod to inject all the diluent into the vial.

- Keep the plunger rod pressed down and swirl the vial gently until all the powder is dissolved.
- Don’t shake the vial as this will cause foaming.
- Check the mixed solution. It must be clear and colorless.
- If you notice visible particles or discoloration, don’t use it. Use a new package instead.

---

**ESPEROCT® is recommended to be used immediately after it is mixed.**

If you cannot use the mixed ESPEROCT® solution immediately, it must be used within 4 hours when stored at ≤86°F (30°C) or within 24 hours when stored in a refrigerator at 36°F to 46°F (2°C to 8°C). Store the reconstituted product in the vial.

Do not freeze mixed ESPEROCT® solution or store it in syringes.

Keep reconstituted ESPEROCT® solution out of direct light.

If your dose requires more than one vial, repeat step A to J with additional vials, vial adapters and pre-filled syringes until you have reached your required dose.

- Keep the plunger rod pushed completely in.
- Turn the syringe with the vial upside down.
- Stop pushing the plunger rod and let it move back on its own while the mixed solution fills the syringe.
- Pull the plunger rod slightly downwards to draw the mixed solution into the syringe.
- In case you only need part of the entire vial, use the scale on the syringe to see how much mixed solution you withdraw, as instructed by your doctor or nurse.
- While holding the vial upside down, tap the syringe gently to let any air bubbles rise to the top.
- Push the plunger rod slowly until all air bubbles are gone.
• Unscrew the vial adapter with the vial.

Don’t touch the syringe tip. If you touch the syringe tip germs from your fingers can be transferred.

Caution: The pre-filled diluent syringe is made of glass with an internal tip diameter of 0.037 inches, and is compatible with a standard Luer-lock connector.

Some needleless connectors for intravenous catheters are incompatible with the glass diluent syringes (for example, certain connectors with an internal spike, such as Clave®/MicroClave®, InVision-Plus®, InVision-Plus CS®, Invision-Plus® Junior®, Binector®).

To administer ESPEROCT® through incompatible needleless connectors, withdraw reconstituted product into a standard 10 mL sterile Luer-lock plastic syringe.

If you have encountered any problems with attaching the pre-filled sodium chloride syringe to any Luer-lock compatible device, please contact Novo Nordisk at (800) 727-6500.

5. Infuse the mixed solution

ESPEROCT® is now ready to infuse into your vein.

• Do not mix ESPEROCT® with any other intravenous infusions or medications.

• Infuse the mixed solution slowly over 1 to 3 minutes as instructed by your doctor or nurse.

Infusing the solution via a central venous access device (CVAD) such as a central venous catheter or subcutaneous port:

• Use a clean and germ free (aseptic) technique. Follow the instructions for proper use for your connector and central venous access device in consultation with your doctor or nurse.

• Infusing into a CVAD may require using a sterile 10 mL plastic syringe for withdrawal of the mixed solution and infusion.

• If necessary, use 0.9% Sodium Chloride Injection, USP to flush the CVAD line before or after ESPEROCT® infusion.

The peel-off label found on the ESPEROCT® vial can be used to record the lot number.

Disposal

• After infusion, safely dispose of all unused ESPEROCT® solution, the syringe with the infusion set, the vial with the vial adapter, and other waste materials in an appropriate container for throwing away medical waste.

Don’t throw it out with the ordinary household trash.

Don’t disassemble the vial and vial adapter before disposal.

Don’t reuse the equipment.

Important information

Contact your healthcare provider or local hemophilia treatment center if you experience any problems.

For full Prescribing Information please read the other insert included in this package.