

## **PATIENT MEDICATION INFORMATION**

### **READ THIS FOR SAFE AND EFFECTIVE USE OF YOUR MEDICINE**

#### **AVONEX™ PS (interferon beta-1a) prefilled syringe**

#### **AVONEX™ PEN (interferon beta-1a) prefilled autoinjector**

Read this carefully before you start taking **AVONEX™ PS/AVONEX™ PEN** and each time you get a refill. This leaflet is a summary and will not tell you everything about this drug. Talk to your healthcare professional about your medical condition and treatment and ask if there is any new information about **AVONEX™ PS/AVONEX™ PEN**.

#### **What is AVONEX™ PS/AVONEX™ PEN used for?**

- To treat relapsing forms of multiple sclerosis (MS), to slow progression of disability, decrease the frequency of exacerbations, and reduce the number and volume of active brain lesions identified on Magnetic Resonance Imaging (MRI) scans.
- To delay the onset of MS in patients who have experienced a single clinical attack accompanied by abnormal MRI scans, to delay the onset of clinically definite MS (as determined by a second demyelinating event), and to decrease the number and volume of active brain lesions and overall disease burden (as identified by MRI scans).

Intended for use under the guidance and supervision of a physician.

#### **How does AVONEX™ PS/AVONEX™ PEN work?**

AVONEX PS/AVONEX PEN will not cure MS but have been shown to decrease the number of flare-ups and slow the occurrence of some of the physical disability that is common in people with MS.

#### **What are the ingredients in AVONEX™ PS/AVONEX™ PEN?**

Medicinal ingredients: interferon beta-1a

Non-medicinal ingredients: sodium acetate trihydrate, glacial acetic acid, arginine hydrochloride, polysorbate 20, water for injection

#### **AVONEX™ PS/AVONEX™ PEN comes in the following dosage forms:**

AVONEX™ PS is a liquid for injection in a 30 µg prefilled syringe.

AVONEX™ PEN is a liquid for injection in a 30 µg prefilled autoinjector.

#### **Do not use AVONEX™ PS/AVONEX™ PEN if:**

- Do not take AVONEX™ PS/AVONEX™ PEN if you have had an allergic reaction (difficulty breathing, itching, flushing or skin bumps spread widely over the body) to interferon beta.

**To help avoid side effects and ensure proper use, talk to your healthcare professional before you take AVONEX™ PS/AVONEX™ PEN. Talk about any health conditions or problems you may have, including if:**

- You have ever had, or currently experience depression (sinking feeling or sadness), anxiety (feeling uneasy or fearful for no reason), or trouble sleeping
- You have problems with your thyroid gland
- You have blood problems such as bleeding or bruising easily and anemia (low red blood cells) or low white blood cells
- You have experienced seizures (for example, epilepsy)
- You have heart problems
- You have liver disease
- You are pregnant or are planning to become pregnant. Tell your healthcare provider if you become pregnant during your treatment with AVONEX™ PS/AVONEX™ PEN.
- You are breastfeeding or plan to breastfeed. You and your healthcare provider should decide if you will use AVONEX™ PS/AVONEX™ PEN or breastfeed

**Other warnings you should know about:**

Blood clots in the small blood vessels may occur during your treatment. These blood clots could affect your kidney (thrombotic thrombocytopenic purpura or haemolytic uremic syndrome). This might happen several weeks to several years after starting AVONEX™ and may cause death. Talk to your doctor if you experience the following symptoms; increased bruising, bleeding, extreme weakness, headache, dizziness or light-headedness. Your doctor may want to check your blood pressure, blood (platelet count) and the function of your kidney.

**Women of Childbearing Potential:**

If you are a woman of childbearing potential and are taking AVONEX™, you should use effective methods of contraception unless you are planning to become pregnant and have talked to your doctor about the potential risks and benefits of staying on AVONEX™. It is not known if interferons interfere with hormonal contraceptives.

**Tell your healthcare professional about all the medicines you take, including any drugs, vitamins, minerals, natural supplements or alternative medicines.**

**There are no known interactions AVONEX™ PS/AVONEX™ PEN.**

**How to take [AVONEX™ PS/AVONEX™ PEN]:**

**Usual dose:**

AVONEX™ PS/AVONEX™ PEN is given by injection into the muscle (intramuscular injection) once a week on the same day (e.g. every Saturday right before bedtime).

Your AVONEX™ PS already includes a needle for injection. It may be possible for your doctor to prescribe you a shorter and thinner needle depending on your body type. Talk to your doctor to see if this is appropriate for you.

Relapsing remitting MS or to delay Clinically Definite MS: usual dose is 30 micrograms once a week.

Secondary progressive/relapsing progressive MS: usual dose is up to 60 micrograms once a week.

To reduce flu-like symptoms at the beginning of treatment, your doctor may start you at a lower dose of AVONEX™ PS and gradually increase the dose over a 3 week period using the AVOSTARTCLIP™ titration device.

RECOMMENDED DOSE TITRATION	
Week 1	Quarter dose (1/4) – approximately 7.5 micrograms
Week 2	Half dose (1/2) – approximately 15 micrograms
Week 3	Three-quarter dose (3/4) – approximately 22.5 micrograms
Week 4+	Full dose – 30 micrograms once a week

Your doctor may prescribe an alternate titration schedule, where the dose will gradually increase over a 6 week period so that the full dose is reached at week 7. Talk to your doctor to see if dose titration is appropriate for you.

If your doctor feels that you, or a family member or friend, may give you the injections, then you and/or the other person should be instructed by your doctor or other healthcare provider in how to prepare and inject your dose of AVONEX™ PS/AVONEX™ PEN. Do not try to give yourself injections at home until you are sure that you or the person who will be giving you the injections, fully understands and is comfortable with how to prepare and inject the product. At the end of this guide there are detailed instructions on how to prepare and give yourself an injection of AVONEX™ PS/AVONEX™ PEN. This will help remind you of the instructions from your doctor or healthcare provider.

#### Overdose:

Take only the dose your doctor has prescribed for you. If you take more than your prescribed dose, call your healthcare provider right away. Your doctor may want to monitor you more closely.

If you think you, or a person you are caring for, have taken too much AVONEX™ PS/AVONEX™ PEN, contact a healthcare professional, hospital emergency department, or regional poison control centre immediately, even if there are no symptoms.

#### Missed Dose:

If you miss a dose, take your next dose as soon as possible. You should continue your regular schedule the following week. **Do not take AVONEX™ PS/AVONEX™ PEN on two consecutive days.**

#### What are possible side effects from using AVONEX™ PS/AVONEX™ PEN?

These are not all the possible side effects you may have when taking AVONEX™ PS/AVONEX™ PEN. If you experience any side effects not listed here, tell your healthcare professional.

**Flu-like symptoms:** Most people who take AVONEX™ PS/AVONEX™ PEN have flu-like symptoms

(fever, chills, sweating, muscle aches and tiredness) early during the course of therapy. Usually these symptoms last for a day after the injection.

To limit possible flu-like symptoms your doctor may recommend that you begin AVONEX™ at a lower dose and gradually increase up to the full dose over a 3 week period using the AVOSTARTCLIP™ titration kit. The AVOSTARTCLIP™ has been designed only for use with AVONEX™ PS by attaching to the syringe and enabling you to gradually increase your dose when you first start treatment.

You may also be able to manage these flu-like symptoms by injecting your AVONEX™ PS/AVONEX™ PEN dose at bedtime and taking over-the-counter pain and fever reducers. For many people, these symptoms lessen or go away over time. Talk to your doctor if these symptoms continue longer than the first few months of therapy, or if they are difficult to manage.

**Depression:** Some patients taking interferons have become severely depressed and/or anxious. If you feel sad or hopeless you should tell a friend or family member right away and call your doctor immediately. Your doctor or healthcare provider may ask that you stop taking AVONEX™ PS/AVONEX™ PEN and/or may recommend that you take a medication to treat your depression.

**Blood problems:** A drop in the levels of white (infection-fighting) blood cells, red blood cells, or a part of your blood that helps to form blood clots (platelets) can happen. If this drop in blood levels is severe, it can lessen your ability to fight infections, make you feel very tired or sluggish, or cause you to bruise or bleed easily.

**Injection site reactions:** Injection site reactions including redness, abscesses, cellulitis and necrosis have been reported with interferon beta products, including AVONEX. Injection sites should be rotated with each administration to minimize the likelihood of injection site reactions. Do not inject into an area that appears sore, red, infected or otherwise damaged in any way. Tell your doctor if you have a skin reaction at the injection site and it does not clear up in a few days.

**Liver problems:** Your liver function may be affected. Symptoms of changes in your liver include yellowing of the skin and whites of the eyes and easy bruising.

**Thyroid problems:** Some people taking AVONEX™ PS/AVONEX™ PEN develop changes in the function of their thyroid. Symptoms of these changes include feeling cold or hot all the time, a change in your weight (gain or loss) without a change in your diet or amount of exercise you get, or feeling emotional.

**Seizures:** Some patients have had seizures while taking AVONEX™ PS/AVONEX™ PEN including patients who have never had seizures before. It is not known whether the seizures were related to the effects of their MS, to AVONEX™ PS/AVONEX™ PEN, or to a combination of both. If you have a seizure while taking AVONEX™ PS/AVONEX™ PEN, you should call your doctor right away.

**Heart problems:** While AVONEX™ PS/AVONEX™ PEN is not known to have any direct effects on the heart, a few patients who did not have a history of heart problems developed muscle heart problems or congestive heart failure after taking AVONEX™. Some of the symptoms of heart problems are swollen ankles, shortness of breath, decreased ability to exercise, fast heartbeat, tightness in chest, increased need to urinate at night, and not being able to lay flat in bed. If you develop these symptoms or any heart problems while taking AVONEX™ PS/AVONEX™ PEN, you should call your doctor right away.

Less common side effects reported in association with interferon beta include:

Respiratory System: shortness of breath, tiredness, chest tightness or pain (pulmonary arterial hypertension).

Serious side effects and what to do about them			
Symptom / effect	Talk to your healthcare professional		Stop taking drug and get immediate medical help
	Only if severe	In all cases	
<b>COMMON</b>			
Flu-like symptoms (fever, chills, sweating, muscle aches and tiredness)	✓		
<b>UNCOMMON</b>			
Depression		✓	
Seizures		✓	
Heart Problems		✓	
Blood Problems		✓	
Liver Problems		✓	
Thyroid Problems		✓	

Your doctor may want to monitor you more closely or may ask you to have periodic blood, liver function and thyroid tests.

If you have a troublesome symptom or side effect that is not listed here or becomes bad enough to interfere with your daily activities, tell your healthcare professional.

#### Reporting Side Effects

You can report any suspected side effects associated with the use of health products to Health Canada by:

- Visiting the Web page on Adverse Reaction Reporting (<https://www.canada.ca/en/health-canada/services/drugs-health-products/medeffect-canada.html>) for information on how to report online, by mail or by fax; or
- Calling toll-free at 1-866-234-2345.

*NOTE: Contact your health professional if you need information about how to manage your side effects. The Canada Vigilance Program does not provide medical advice.*

#### Storage:

AVONEX™ PS/AVONEX™ PEN should be stored in a refrigerator at 2°C to 8°C. Before your injection, AVONEX™ PS/AVONEX™ PEN should be taken out of the refrigerator and allowed to warm to room temperature over 30 minutes. Do not use external heat sources, such as hot water, to warm AVONEX™ PS/AVONEX™ PEN. AVONEX™ PS/AVONEX™ PEN can be stored at room temperature (15°C to 30°C) for up to one week.

Do not expose the prefilled syringe of AVONEX™ PS or the prefilled autoinjector of AVONEX™ PEN to high temperatures or freezing. Protect from light.

Keep out of reach and sight of children.

## HOW TO PREPARE AND INJECT A DOSE WITH THE PREFILLED SYRINGE OF AVONEX PS

If your doctor has recommended that you start AVONEX PS at a lower dose and gradually increase up to the full dose (dose titration), please follow the instructions for use included in the AVOSTARTCLIP™ titration kit provided to you by your doctor or nurse. The AVOSTARTCLIP kit contains three different coloured clips (labelled Week 1, 2 and 3). Each clip can be attached onto the syringe to help deliver either a quarter (1/4), half (1/2), or three-quarter (3/4) dose of AVONEX PS. Each clip should be used only once and then disposed of with any remaining AVONEX PS in the syringe.

Find a well-lit, clean, flat work surface like a table and collect all the supplies you will need to give yourself or to receive an injection. You should take one AVONEX PS administration dose pack out of the refrigerator about 30 minutes before you plan on injecting your dose to allow it to reach room temperature. A room temperature solution is more comfortable to inject.

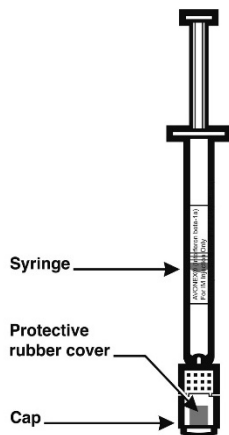
You will need the following supplies:

- single-use prefilled syringe (AVONEX PS)
- sterile needle
- alcohol wipe
- gauze wipe
- adhesive bandage
- a puncture resistant container for disposal of used syringes and needles

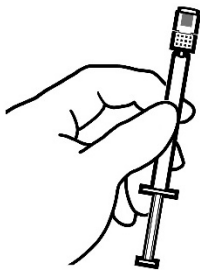
### Preparing the prefilled syringe of AVONEX PS for injection

It is important to keep your work area, your hands and your injection site clean to minimize risk of infection. You should wash your hands prior to handling the syringe.

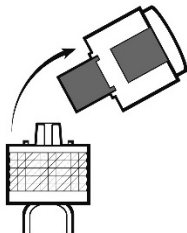
1. Check the expiration date. The expiration date is printed on the prefilled syringe of AVONEX PS, syringe package and the carton. Do not use if the medication is expired.
2. Check the contents of the syringe. The solution in the syringe should be clear and colourless. If the solution is coloured or cloudy, do not use the syringe. Get a new syringe.
3. Check to make sure the amount of liquid in the syringe is the same or very close to the 0.5 mL mark. If the syringe does not have the correct amount of liquid, DO NOT USE THAT SYRINGE. Call your pharmacist.
4. The syringe has a tamper evident cap. Check the cap on the end of the syringe to confirm it is attached and has not been opened. If the cap is not securely attached or appears to have been opened, DO NOT USE THAT SYRINGE. Call your pharmacist.



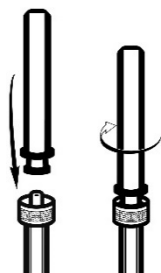
5. Hold the prefilled syringe of AVONEX PS upright (so that the cap is pointing up).



6. Remove the cap by bending it at a 90° angle until it snaps free.

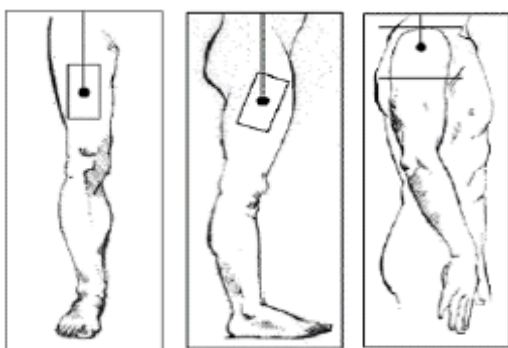


7. Open the package with the needle. Attach the needle by pressing it onto the syringe and turning it clockwise until it locks in place. NOTE: If you do not firmly attach the needle to the syringe, it may leak so you may not get your full dose of AVONEX PS. Be careful not to push the plunger while attaching the needle.



The best sites for intramuscular injection are the thigh and upper arm:

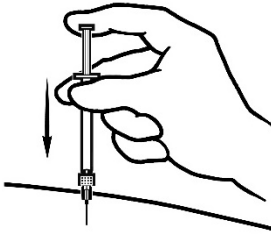
- **thigh**
- **upper arm**



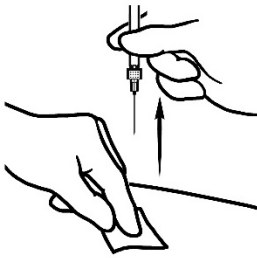
You should rotate injection sites each week. This can be as simple as switching between thighs (if you are always injecting yourself). If another person is helping you, you can rotate among your thighs and upper arms. Make sure that the site you choose is free from any skin irritations.

1. Use a new alcohol wipe to clean the skin at one of the recommended intramuscular injection sites. Allow the skin to dry. Do not touch this area again before giving the injection. Then, pull the protective cover straight off the needle; do not twist the cover off.
2. With one hand, stretch the skin out around the injection site. Hold the syringe like a pencil with the other hand, and using a quick motion insert the needle at a 90° angle, through the skin and into the muscle.
3. Once the needle is in, let go of the skin and slowly push the plunger down until the syringe is empty.





4. Hold a gauze pad near the needle at the injection site and pull the needle straight out. Use the pad to apply pressure to the site for a few seconds or rub gently in a circular motion.



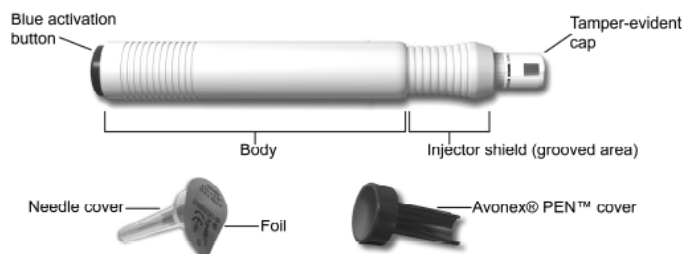
5. If there is bleeding at the site, wipe it off and, if necessary, apply an adhesive bandage.
6. Dispose of the used needle as your doctor, nurse or pharmacist has told you. DO NOT USE the syringe or needle of AVONEX PS more than once. Do not throw used needles into the household trash and do not recycle.

Find a well-lit, clean, flat work surface like a table and collect all the supplies you will need to give yourself or to receive an injection. You should take one AVONEX PEN administration dose pack out of the refrigerator about 30 minutes before you plan on injecting your dose to allow it to reach room temperature. A room temperature solution is more comfortable to inject.

You will need the following supplies:

- single-use prefilled autoinjector (AVONEX PEN)
- sterile needle
- alcohol wipe
- gauze wipe
- adhesive bandage
- a puncture resistant container for disposal of used AVONEX PEN
- AVONEX PEN cover

### Identifying parts of your AVONEX PEN



### Preparing the prefilled autoinjector of AVONEX PEN for injection

It is important to keep your work area, your hands and your injection site clean to minimize risk of infection. You should wash your hands prior to handling the AVONEX PEN autoinjector.

1. Check the expiration date. The expiration date is printed on the prefilled autoinjector of AVONEX PEN, the AVONEX PEN Administration Dose Package carton and the outer carton. Do not use if the medication is expired.
2. Remove the tamper-evident cap.
  - Hold AVONEX PEN upright so that the cap is pointing up.
  - Check that the cap is intact and has not been opened. If the cap looks like it has been opened or is not securely attached, do not use that AVONEX PEN.



- Remove the cap by bending it at a 90° angle until it snaps off.



- The glass syringe tip will now be visible. Do not touch the glass tip of the syringe.

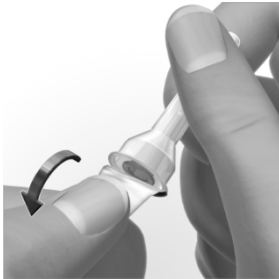


- Place AVONEX PEN down on a flat work surface before beginning step 3.

3. Attach the needle.

NOTE: AVONEX PEN has been designed to function only with the supplied needle.

- Peel off the foil from the base of the needle cover.



- Hold AVONEX PEN upright, so that the glass syringe tip is pointed up.
- Attach the needle by pressing it onto the AVONEX PEN glass syringe tip.
- Do not remove the needle cover.



- Gently turn the needle clockwise until it is firmly attached, otherwise the needle may leak, and you may not get your full dose of AVONEX PEN.



NOTE: The needle cover will come off automatically during step 4, below.



4. Extend AVONEX PEN injector shield over the needle.

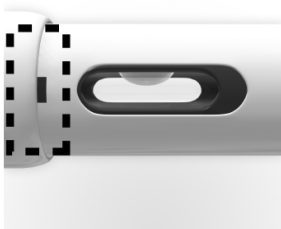
- Hold the body of the pen firmly with one hand. Point the needle cover away from you and anyone else.



- Using your other hand, with one quick motion pull the injector shield up (grooved area) over the needle until it is fully covered.
- The plastic needle cover will “pop” off.



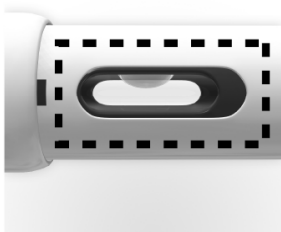
- The injector shield is extended correctly when the safety lock (the small rectangle) is clearly visible next to the oval medication display window.



**Safety lock visible**

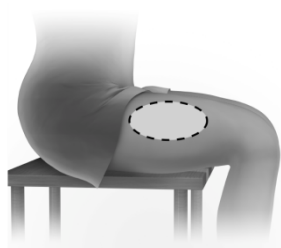
5. Check the liquid.

- Look through the oval medication display window. The liquid should be clear and colourless. Air bubble(s) are normal.
- If the liquid is coloured or cloudy, or contains any floating particles, do not use that AVONEX PEN. Get a new AVONEX PEN.



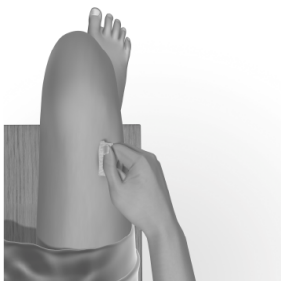
**Oval medication display window**

AVONEX PEN should be injected into the upper outer thigh.



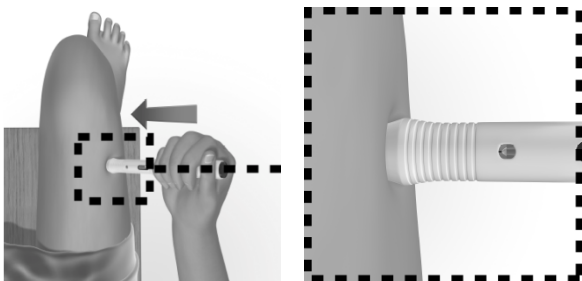
You should rotate injection sites each week. This can be as simple as switching between thighs (if you are always injecting yourself). Make sure that the site you choose is free from any skin irritations.

1. Use a new alcohol wipe to clean the skin at the recommended intramuscular injection site. Allow the skin to dry. Do not touch this area again before giving the injection. The best area for injection is the upper, outer thigh.



2. Place AVONEX PEN on the skin.

- Hold the AVONEX PEN at a 90° angle to the injection site. Make sure the windows are visible.
- Keeping your fingers away from the blue activation button, firmly press the body of AVONEX PEN down to the skin to release the safety lock.



- Check the safety lock is released. You will know the safety lock is released when the small rectangular area above the oval medication display window disappears.



**Safety lock visible**



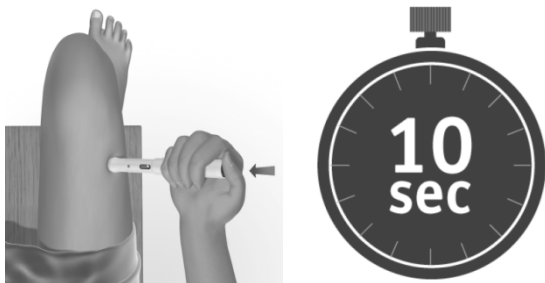
**Safety lock released**

- AVONEX PEN is now activated and ready to inject.

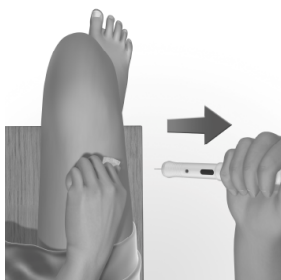
NOTE: Continue to press the AVONEX PEN firmly on to the skin.

3. Give the injection.

- Press the blue activation button with your thumb to start the injection.
- You will hear a “click” when the injection has begun.
- Continue to hold the pen on your skin and count slowly for a full 10 seconds.



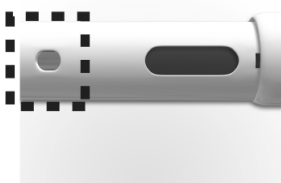
- After 10 seconds pull the AVONEX PEN straight out to remove the needle from the injection site.



- Use the gauze pad to apply pressure to the injection site for a few seconds or rub gently in a circular motion.
- If there is bleeding at the site, wipe it off and if necessary, apply a bandage.

#### 4. Confirm delivery

- Check the circular display window. The window will now appear yellow when the full dose has been delivered.



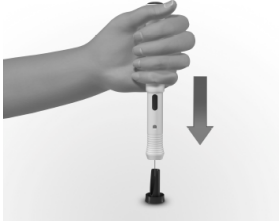
- Do not re-use the AVONEX PEN. It is for a single use only.

#### 5. AVONEX PEN disposal

- Place the AVONEX PEN cover on a flat work surface.

NOTE: Do not hold the cover since it may increase the chance of needle injury.

- Align the exposed needle with the hole of the AVONEX PEN cover, and insert directly into the opening.



- Firmly press down until you hear a “click” to seal the needle. You may need to use both hands.



- Dispose of the used AVONEX PEN as your doctor, nurse or pharmacist has told you. Do not throw used needles into the household trash and do not recycle.
- This is a single-use autoinjector. Do not use the AVONEX PEN more than once.



**If you want more information about AVONEX™ PS/AVONEX™ PEN:**

- Talk to your healthcare professional
- Find the full product monograph that is prepared for healthcare professionals and includes this Patient Medication Information by visiting the Health Canada website: <https://www.canada.ca/en/health-canada/services/drugs-health-products/drug-products/drug-product-database.html>; the manufacturer’s website [www.biogen.ca](http://www.biogen.ca), or by calling 1-800-676-6300.

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