

# DMTs and the Caregiver Role

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# Caregivers for MS patients

- MS is a chronic disease with variable symptoms
- Important part of successful DMT use is compliance to the treatment plan
- Use of DMT includes laboratory monitoring, use of medications to lessen side effects and knowledge of injection techniques

# Caregivers are Important!

- The emotional and physical support provided by a caregiver is crucial
- Research shows that patients who stick to a treatment plan have the best response.
- While patients usually focus on the disease state alone, caregivers see the whole person and are instrumental in addressing all the patient needs

# What are some basics?

- Always know the active ingredient in the medication
- Give the right medicine in the right dose
- Talk to your pharmacist or nurse manager if you have questions on the medication
- Store medications in safe location
- Dispose of injection equipment safely

# Types of DMTs

- Injection
  - Subcutaneous
  - intramuscular
- Oral
- Infusion

# Rebif, Copaxone, Glatopa, Betaseron

- Rebif (interferon beta-1a)
- Copaxone & Glatopa (glatiramer acetate)
- Betaseron (interferon beta-1b)
- These are subcutaneous injections
  - Subcutaneous means under the skin. In this type of injection, a short needle is used to inject a drug into the tissue layer between the skin and the muscle. Medication given this way is usually absorbed more slowly than if injected into a vein, sometimes over a period of 24 hours.

# Subcutaneous Injection



Alcohol Wipe



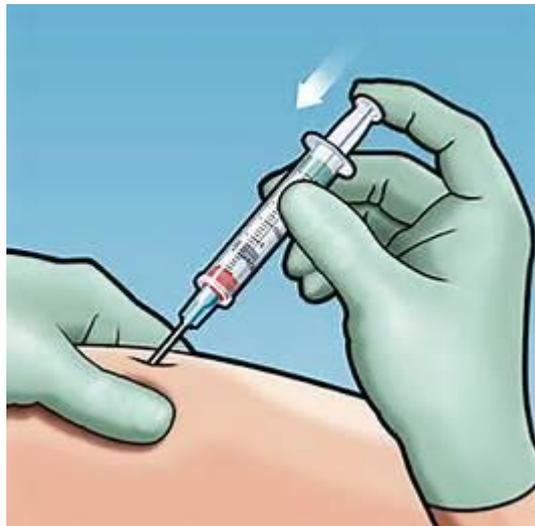
Gauze Pad



Adhesive Bandage



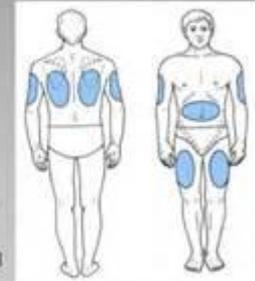
Sharps Container



## SUBCUTANEOUS INJECTION

### Common sites used for SQ route:

- Outer aspect of the upper arm
- Abdomen (from below the costal margin to the iliac crests)
- Anterior aspects of the thigh
- Upper back
- Upper ventral or dorsogluteal area



# Skincare before and after injection

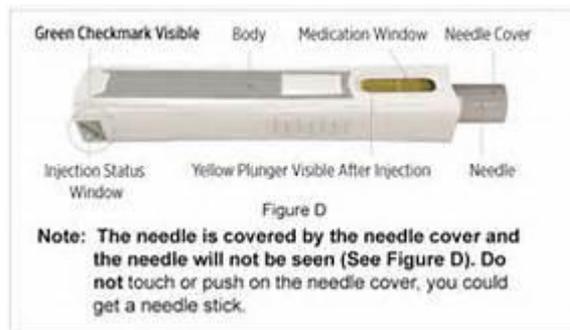
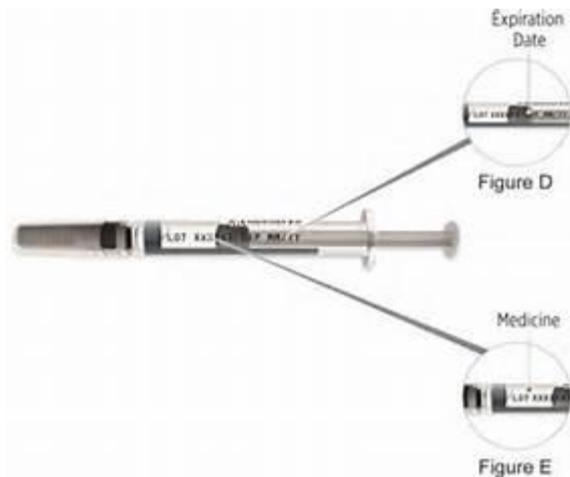
- Avoid the use of lotions/fake tan/sun beds
- Only use witch hazel, arnica cream or aloe vera on injection sites other products may cause irritation
- Report any injection site problems to your doctor/nurse/pharmacist
- Avoid rubbing the area post injection
- Use a clean tissue/cotton ball to dab the area

# Betaseron and Rebif

- Betaseron (interferon beta-1b)
- Rebif (interferon beta-1a)



# Plegridy (peginterferon beta-1a)



## VISUAL CUES

Stripes turn to checkmarks when dose is complete

## AUDIO CUES

Audible clicks will silence when dose is complete

## COMFORTABLE GRIP

Fit for all hand sizes

## PLUNGER

Becomes yellow when PLEGRIDY dose is complete

## NEEDLE COVER

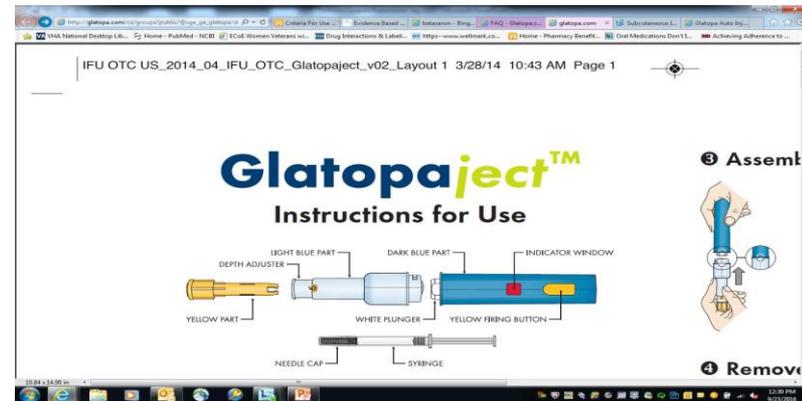
Hides the needle before, during, and after injection

## AUTOINJECT TIP

Inject PLEGRIDY without pushing a button



# Copaxone & Glatopa (glatiramer acetate)



# Zinbryta (daclizumab)

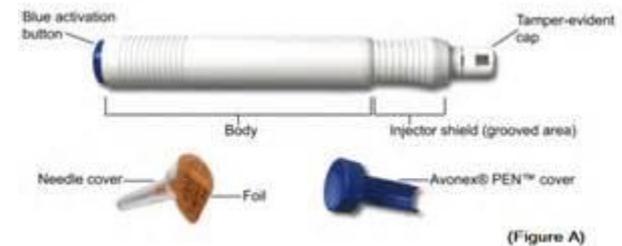


150 mg Prefilled Syringe

# Avonex (dimethyl fumarate)

- Intramuscular Injection
  - An intramuscular injection is a technique used to deliver a medication deep into the muscles. Intramuscular injection is absorbed faster than subcutaneous injection. This is because muscle tissue has a greater blood supply than the tissue just under the skin. Muscle tissue can also hold a larger volume of medication than subcutaneous tissue.

# Avonex (dimethyl fumarate)



# Oral Agents



- Gilenya (fingolimod)
- Aubagio (teriflunomide)
- Tecfidera (dimethyl fumarate)

# Infusion Therapies

- Tysabri (natalizumab)
- Lemtrada (alemtuzumab)



# Storage Requirements

- Room temperature ( 59-86° F)
  - Aubagio (teriflunomide)
  - Betaseron (interferon beta-1b)
  - Copaxone (glatiramer acetate)
  - Gilenya (fingolimod)
  - Tecfidera (dimethyl fumarate)
- Refrigerate (36-46°F) or Room Temperature  $\leq$  30 days
  - Avonex (dimethyl fumarate).
  - Glatopa (glatiramer acetate)
  - Rebif (interferon beta-1a)
  - Zinbryta (daclizumab)
  - Plegridy (peginterferon beta-1a)

# Potential Side Effects

- Flu like symptoms
- Injection site reactions
- Altered laboratory testing
- Depression
- IPIR (immediate post injection reaction)

# How to manage side effects

- Prophylactic acetaminophen or ibuprofen
- Timing of injection; at night
- Rotation of injection sites
- Reporting of side effects
- Take with food

# Monitoring Requirements

- Commitment to clinic appointments
- Blood monitoring
- Reporting of side-effects
- Relapse management / reporting

# Special Instructions

- Gilenya (fingolimod) First Dose
- What if I miss a dose?
- Can I take with other medications?
- What about the flu vaccine?
- What about my vitamins and herbal supplements?

