

# Disease-modifying drugs (DMDs) what's the difference?

	Immunomodulators					Selective adhesion molecule (SAM) inhibitor	Sphingosine 1-phosphate receptor (S1PR) modulator (Immunosuppressant)
Approved uses	Avonex® (interferon beta-1a) <sup>1</sup>	Rebif® (interferon beta-1a) <sup>2</sup>	Betaseron® (interferon beta-1b) <sup>3</sup>	Extavia® (interferon beta-1b) <sup>4</sup>	Copaxone® (glatiramer acetate) <sup>5</sup>	Tysabri® (natalizumab) <sup>6¶</sup>	Gilenya® (fingolimod) <sup>7¶</sup>
Slows the development of physical disability	✓	✓				✓	✓
Decreases the number of flare-ups	✓	✓	✓	✓	✓	✓	✓
Reduces disease activity as measured by MRI* for people with RRMS	✓	✓			✓	✓	✓
Treatment for Clinically Isolated Syndrome (CIS) with MRI results consistent with MS	✓		✓	✓	✓		
Reduction of flare-ups and improvement in MRI measures in people with SPMS (who still have flare-ups)	✓	✓					
Safety/Tolerance†							
Most common side effects (most of these symptoms tend to disappear over time)	Flu-like symptoms‡	Flu-like symptoms‡ and injection site reactions§	Flu-like symptoms‡ and injection site reactions§	Flu-like symptoms‡ and injection site reactions§	Injection site reactions§	Flu-like symptoms‡, urinary tract infection, sore throat, runny nose, hives, dizziness, nausea, vomiting, joint pain, tiredness and infusion reactions	Infection from flu virus with symptoms such as tiredness, chills, sore throat, joint or muscles aching, fever; headache; diarrhea; back pain; cough; abnormal liver function tests.

\*The exact relationship between MRI findings and the clinical status of patients is unknown.

†The content comes from the consumer portion of the Product Monograph for each disease-modifying drug. This includes a list of the Very Common Side Effects. Where Very Common Side Effects were not listed, all Common Side Effects were included. Where Common Side Effects were not listed Common Serious Side Effects were included.

‡Flu-like symptoms: fatigue, chills, fever, muscle aches and sweating.

§Injection site reactions; swelling, redness, discolouration and pain.

¶Natalizumab or fingolimod is generally recommended for MS patients who have had an inadequate response to, or are unable to tolerate, other MS therapies.

#### References:

1. Avonex® Product Monograph. Biogen Idec Canada Inc. April 2011.
2. Rebif® Product Monograph. EMD Serono Canada Inc. May 2011.
3. Betaseron® Product Monograph. Bayer Canada Inc. December 2009.
4. Extavia® Product Monograph. Novartis Pharmaceuticals Canada Inc. December 2010.
5. Copaxone® Product Monograph. Teva Neuroscience. April 2009.
6. Tysabri® Product Monograph. Biogen Idec Canada Inc. November 2010.
7. Gilenya® Product Monograph. Novartis Pharmaceuticals Canada Inc. March 2011.

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Rebif® is a registered trademark of EMD Serono.

Betaseron® is a registered trademark of Bayer Inc.

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