

Medications to Treat Mast Cell Diseases

<https://tmsforacure.org/treatments-2/medications-treat-mast-cell-diseases/>

ALL PATIENTS:

Self-Injectable Epinephrine (two doses; e.g., EpiPen®/EpiPen Jr®) should be carried by all patients with a mast cell disorder at all times, even if previous anaphylaxis has not occurred. Both the patient and family members/caregivers should be trained on administering the epinephrine!

Basic Medications for Symptomatic Patients with Mast Cell Diseases¹⁻⁴

- **H1 antihistamines:** help with itching, abdominal pain, flushing, headaches, brain fog
- **H2 antihistamines:** help with gastrointestinal symptoms and overall mast cell stability (all mast cell activation symptoms)
- **Mast cell stabilizers:** help with stomach and intestinal symptoms and brain fog
- **Leukotriene inhibitors:** help with respiratory symptoms and overall mast cell stability (all mast cell activation symptoms)
- **Aspirin therapy** (*under direct supervision of a physician*): if tolerated and if prostaglandins are elevated, helps with flushing, brain fog and bone pain

Note: The H1 and H2 antihistamines are necessary to stabilize receptors on the mast cell. Therefore, if additional medication is required for control of gastroesophageal reflux (GERD), a proton pump inhibitor may be added to this protocol, but it cannot replace the H2 antihistamine.

Please see **Tables 1-6** for lists of some specific drugs in these different categories.

Please see **Table 7** for a list of some specific drugs for *advanced systemic mastocytosis*.

Table 1. Some First Generation H1 Antihistamines

Brand Name	Generic Name
Atarax®	Hydroxyzine hydrochloride
Benadryl®	Diphenhydramine
Chlortrimeton®	Chlorpheniramine
Doxepin®, Sinequan®	Doxepin hydrochloride
Tavist®	Clemastine

Table 2. Some Second Generation H1 Antihistamines (may tend to cause less drowsiness)

Brand Name	Generic Name
Allegra®	Fexofenadine
Claritin®	Loratidine
Clarinex®	Desloratidine
Zaditor®/Zaditen® (in Europe)*	Ketotifen
Xyzal®	Levocetirizine
Zyrtec®	Cetirizine

*Zaditor® is only available in the US as eye drops; Zaditen® is available by prescription, but it must be obtained from a compounding pharmacy or from abroad.

Table 3. Some H2 Antihistamines

Brand Name	Generic Name
Axid®	Nizatidine
Pepcid®	Famotidine
Tagament®	Cimetidine
Zantac®	Ranitidine

Table 4. Some Leukotriene Inhibitors

Brand Name	Generic Name
Singulair®	Montelukast
Accolate®	Zafirlukast
Zyflo®/Zyflo CR®	Zileuton

Table 5. Mast Cell Stabilizers

Brand Name	Generic Name
Gastrocrom®	Oral cromolyn sodium
Zaditor®/Zaditen® (in Europe)*	Ketotifen
Algonot, Neuroprotect, etc.	Food supplements containing bioflavonoids such as quercetin and luteolin

Bayer aspirin; Aspirin; ASA	Aspirin, acetylsalicylic acid (for those with high prostaglandin levels; aspirin therapy must be initiated under the direct supervision of a physician!)
-----------------------------	--

* Zaditor® is only available in the US as eye drops; Zaditen® is available by prescription, but it must be obtained from a compounding pharmacy or from abroad.

Table 6. Proton Pump Inhibitors to Help with GERD (Gastroesophageal Reflux)

Brand Name	Generic Name
Aciphex®	Rabeprazole
Dexilant®	Dexlansoprazole
Nexium®	Esomeprazole
Prevacid®	Lansoprazole
Prilosec®	Omeprazole
Protonix®	Pantoprazole

Table 7. Some Chemotherapy Drugs for Selected Patients with Smoldering and Advanced Variants of Systemic Mastocytosis^{1,5}

Brand Name	Generic Name
Gleevec®	Imatinib
Masivet®	Masitinib
Sprycel®	Dasatinib
Tasigna®	Nilotinib
Rydapt	PKC 412
Hydrea®	Hydroxyurea
Leustatin®, Leustat®, Litak®	Cladribine, 2-CDA
Intron®	Interferon Alfa-2b

There are several more therapies in the pipeline, including additional tyrosine kinase inhibitors and other targeted therapies.

Sometimes symptoms change, and it becomes necessary to increase or decrease doses of medications, or to add additional medications to a patient's prescribed protocol. The simplest change made in conjunction with your mast cell specialist can make such a difference in your symptoms! Although it is tempting to change dosing regimens on your own, please always work with your physician to achieve the safest, most effective outcome!

References

1. Pardanani A. **Systemic mastocytosis in adults: 2015 update on diagnosis, risk stratification, and management.** Am J Hematol. 2015 Mar;90(3):250-62. <http://www.ncbi.nlm.nih.gov/pubmed/25688753>
2. Theoharides TC, Valent P, Akin C. **Mast Cells, Mastocytosis, and Related Disorders.** N Engl J Med. 2015 Jul 9;373(2):163-72. <http://www.ncbi.nlm.nih.gov/pubmed/26154789>
3. Akin C. **Mast cell activation disorders.** J Allergy Clin Immunol Pract. 2014 May-Jun; 2(3):252-7 e1; quiz 8. <http://www.ncbi.nlm.nih.gov/pubmed/24811013>
4. Picard M, Giavina-Bianchi P, Mezzano V, Castells M. **Expanding spectrum of mast cell activation disorders: monoclonal and idiopathic mast cell activation syndromes.** Clin Ther. 2013 May;35(5):548-62. <http://www.ncbi.nlm.nih.gov/pubmed/23642289>
5. Ustun C, DeRemer DL, Akin C. **Tyrosine kinase inhibitors in the treatment of systemic mastocytosis.** Leuk Res. 2011 Sep;35(9):1143-52. <http://www.ncbi.nlm.nih.gov/pubmed/21641642>