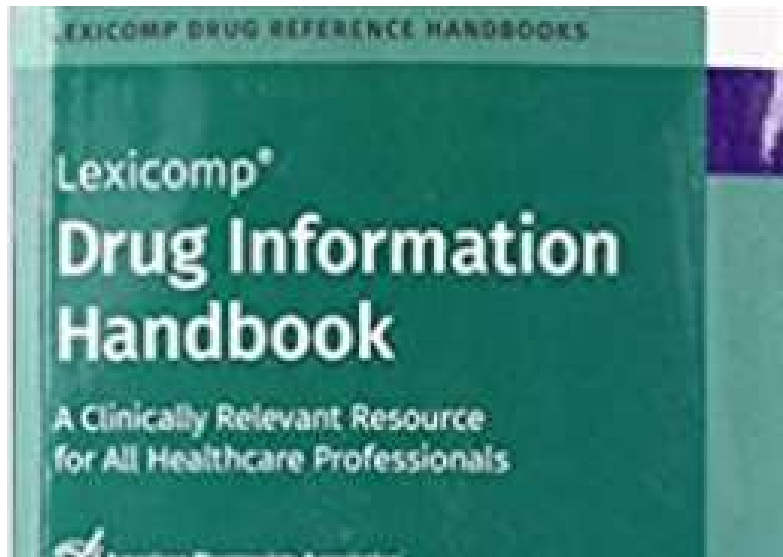




**Anti-Depression Drugs  
= Anti-Depressant Agents  
= Anti-Depressants**

Sara Rasoul-Amini, Pharm D, PhD in Medicinal Chemistry;  
Department of Medicinal Chemistry, School of Pharmacy,  
Shiraz University of Medical Sciences(SUMS)- Feb2024<sub>1</sub>

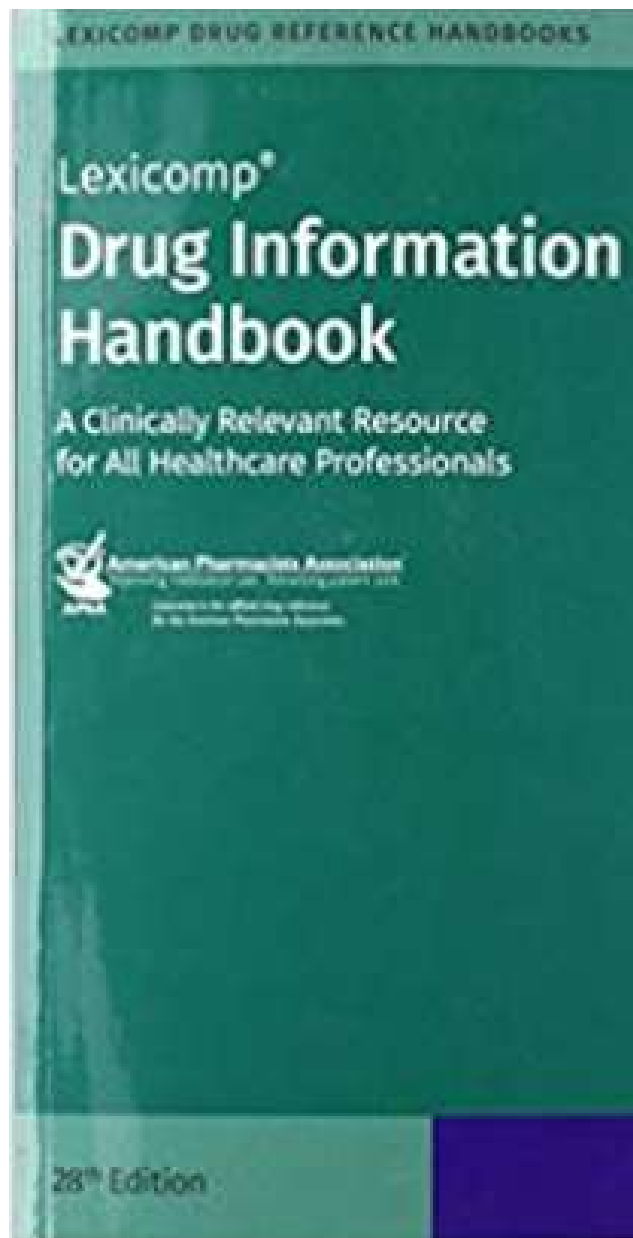


# Drug Reference

The Drug Information Handbook, the flagship publication from Lexicomp, is trusted by a wide variety of healthcare professionals to deliver timely, clinically relevant pharmacotherapy knowledge.

Endorsed by the American Pharmacists Association (APhA), the Drug Information Handbook is chosen daily by healthcare professionals as their resource to help improve medication safety and enhance patient care.

This handbook follows a **dictionary-like format**, with drug products organized alphabetically and cross-referenced by U.S. and Canadian brand names and index terms. Healthcare professionals have access to more than **1700 drug monographs**, each offering up to 48 fields of information specific to a particular medication. Supplementing the drug information is an extensive Appendix, offering helpful treatment guidelines and therapy recommendations, and a **Pharmacologic Category Index**.



Includes:

- 1745 Drug Monographs
- Up to 48 Fields of Information per Monograph
- More than 50 Pages of Appendix Information

Updates to this edition:

- 65 New Drug Monographs
- 6 New/Revised Monograph Fields
- Dosing: Renal Impairment: Adult
- Dosing: Hepatic Impairment: Adult
- Dosing: Renal Impairment: Pediatric
- Dosing: Hepatic Impairment: Pediatric
- 6 Updated Appendix Topics
- Immunization Schedules
- Immunization Administration Recommendations
- Opioid Conversion Table and Morphine Equivalent Dose Table
- Oral Anticoagulant Comparison Chart

# Monograph Template for This File Following Lexi's Format

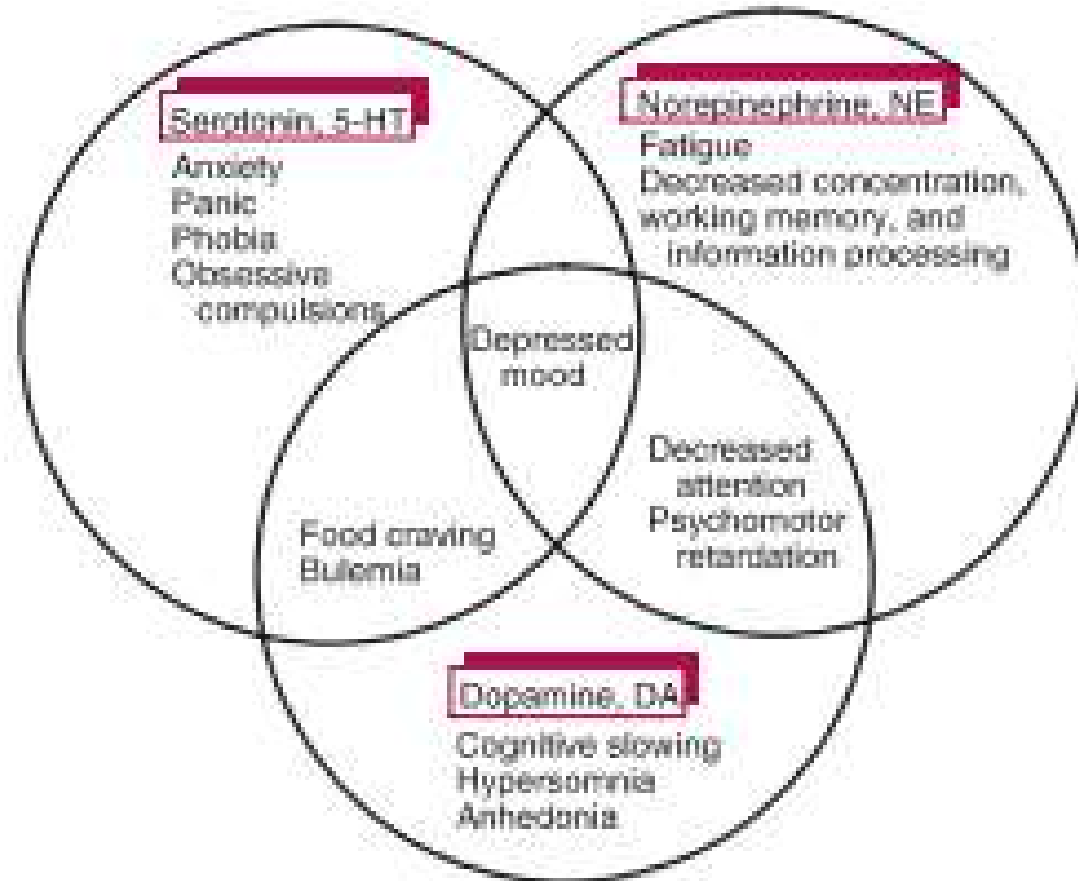
- Title: pharmacologic classification (pharmacologic category)
- Generic name
- Brand/Trade name/s
- Dosage form/s: tab.; cap.; inj.
- Mechanism Of Action (MOA)
- ✓ Labeled & un-labeled use (indication)
- ✓ Administration
- Metabolism
- Drug-Drug Interactions
- Avoid concomitant use
- Side effect/s
- Monitoring
- Company names:

# Followed Format as Monograph of Drugs in This Course

<b>Generic Name</b>		<b>Chemical Structure</b>	نام ژنریک دارو
<b>Trade Name</b>			نام / های تجاری رایج
<b>Available Market Dosage Forms (Iran/ International Market)</b>			فرم های دارویی موجود در ایران/جهان
<b>Any Particular Point in the Available Dosage Form</b>			نکته قابل توجه درباره فرمولاسیون رایج
<b>Stability</b>			پایداری فرم دارویی
<b>Pharmacologic Category</b>			دسته فارماکولوژیکی
<b>Mechanism of Action</b>			مکانیسم عمل
<b>Labeled Use</b>			کاربرد درمانی اصلی
<b>Unlabeled Use</b>			کاربرد درمانی فرعی
<b>Administration</b>			نحوه مصرف (تجویز)
<b>Onset of action</b>			شروع اثر
<b>Metabolism</b>			متابولیسم
<b>Minimum Efficient Dose</b>			حداقل دوز موثر
<b>Maximum Efficient Dose</b>			حداکثر دوز موثر
<b>Monitoring</b>			مانیتورینگ (پایش)
<b>Pregnancy Limitations</b>			محدودیت مصرف در بارداری

SRAmmini Feb2024

# Neurotransmitter Deficiency Syndromes



**Figure 11.25** Neurotransmitter deficiency syndromes and their interactions.

# Sites of Action for Antidepressants

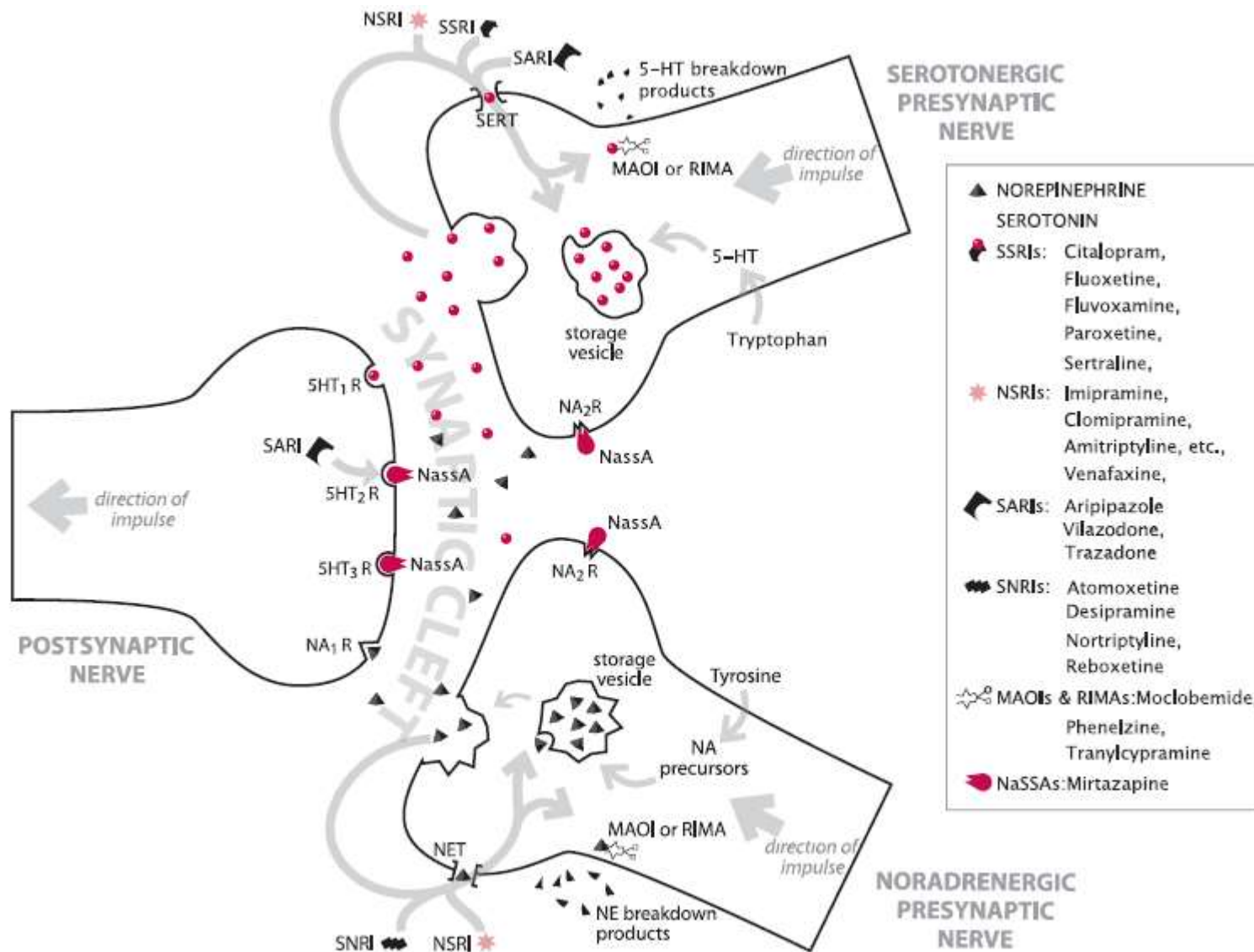
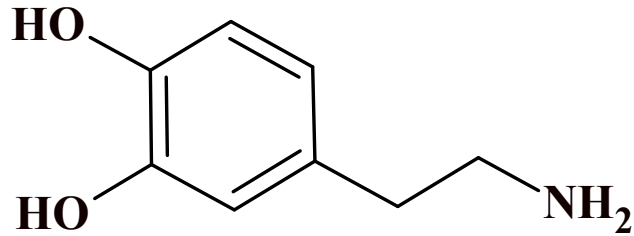
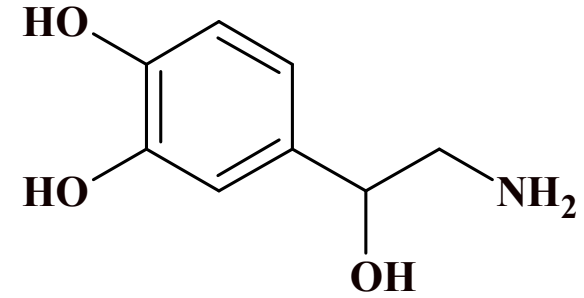


FIGURE 18.3 Sites of action of the antidepressants.

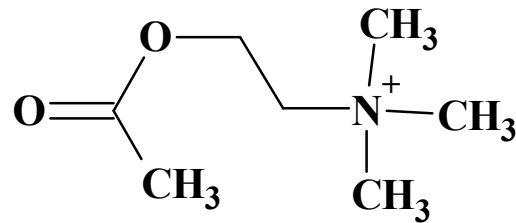
# Mono-Amines Neurotransmitters in Nervous System



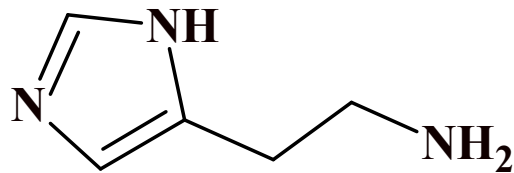
Dopamine



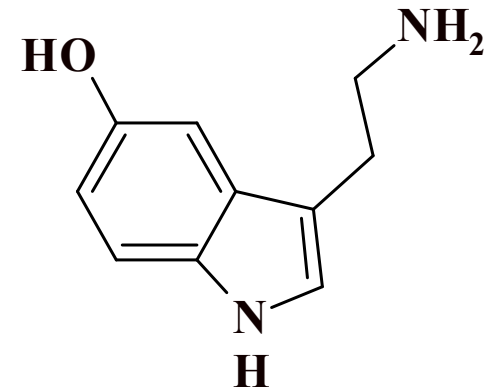
NorEpinephrine



Acetylcholine



Histamine



Serotonin



# Pharmacologic Classification of Antidepressants

- Selective Ser Reuptake Inhibitors (SSRIs): non-TCA
- Selective NE Reuptake Inhibitors (SNRIs): non-TCA; TCA
- NE & Ser Reuptake Inhibitors (NSRIs): non-TCA; TCA
- Dop & NE Reuptake Inhibitors (DNRIs)
- Ser Receptor Modulators & Stimulators (SMSs):
- ✓ Noradrenergic & Specific Ser Antidepressants (NaSSAs)
- ✓ Ser Antagonists / Reuptake Inhibitors (SARIs)
- Monoamine Oxidase Inhibitors (MAOIs)
- Ser precursors & providers
- Mood stabilizers
- Melatonergic agonist / Ser antagonist

**TABLE 30-2** Blocking effects of some antidepressant drugs on several receptors and transporters.

Antidepressant	ACh M	$\alpha_1$	H <sub>1</sub>	5-HT <sub>2</sub>	NET	SERT
Amitriptyline	+++	+++	++	0/+	+	++
Amoxapine	+	++	+	+++	++	+
Bupropion	0	0	0	0	0/+	0
Citalopram, escitalopram	0	0	0		0	+++
Clomipramine	+	++	+	+	+	+++
Desipramine	+	+	+	0/+	+++	+
Doxepin	++	+++	+++	0/+	+	+
Fluoxetine	0	0	0	0/+	0	+++
Fluvoxamine	0	0	0	0	0	+++
Imipramine	++	+	+	0/+	+	++
Maprotiline	+	+	++	0/+	++	0
Mirtazapine	0	0	+++	+	+	0
Nefazodone	0	+	0	++	0/+	+
Nortriptyline	+	+	+	+	++	+
Paroxetine	+	0	0	0	+	+++
Protriptyline	+++	+	+	+	+++	+
Sertraline	0	0	0	0	0	+++
Trazodone	0	++	0/+	++	0	+
Trimipramine	++	++	+++	0/+	0	0
Venlafaxine	0	0	0	0	+	++
Vortioxetine <sup>1</sup>	ND	ND	ND	ND	+	+++

<sup>1</sup> Vortioxetine is an agonist or partial agonist at 5-HT<sub>1A</sub> and 5-HT<sub>1B</sub> receptors, an antagonist at 5-HT<sub>3</sub> and 5-HT<sub>7</sub> receptors, and an inhibitor of SERT.

ACh M, acetylcholine muscarinic receptor;  $\alpha_1$ , alpha<sub>1</sub>-adrenoceptor; H<sub>1</sub>, histamine<sub>1</sub> receptor; 5-HT<sub>2</sub>, serotonin 5-HT<sub>2</sub> receptor; ND, no data found; NET, norepinephrine transporter; SERT, serotonin transporter.

0/+, minimal affinity; +, mild affinity; ++, moderate affinity; +++, high affinity.

# Considering Items in Providing Anti-Depressants

- Tapering start & stop
- Daily time of administration: morning, midday or night.
- Pregnancy & lactation
- Cautions for:
  - ✓ co-administration of neurotransmitter related drugs: Ser syndrome
  - ✓ co-administration of supplement including Trp related ingredients
  - ✓ co-administration of nutraceuticals including valerian, ..
- Free interval within administration of MAO-inhibitors
- Interaction to alcohol & alcoholic products