

MONOAMINE OXIDASE INHIBITORS (MAOIS)



MAOIs inhibit monoamine oxidase A (MAO-A) in the nerve terminals, which increases the amount of norepinephrine (NE) and serotonin (5-HT) available.

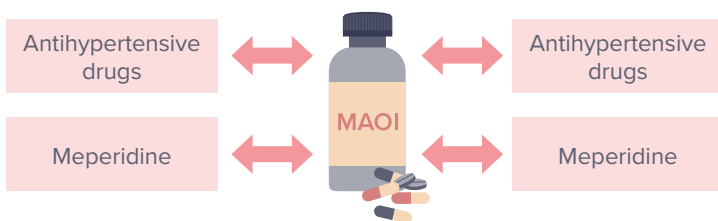
Examples

- Isocarboxazid (Marplan)
- Phenelzine (Nardil)
- Tranylcypromanine (Parnate)
- Selegiline (Emsam)

Used against

- Depression
- Bulimia nervosa
- Obsessive-compulsive disorders
- Panic attacks

Interactions with MAOIs

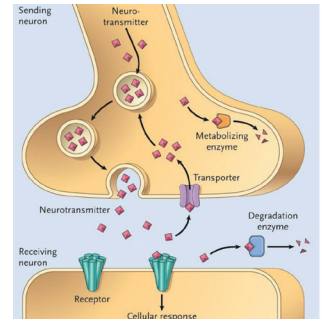


Tyramine-containing Foods to Avoid

- Meat
- Sausage, bologna, pepperoni, and salami
- Ginseng
- Protein extracts
- Protein dietary supplements
- Sauerkraut
- Shrimp paste
- Soups
- Miso
- Yeast
- Alcoholic beverages – Chianti wine and vermouth
- Banana peels
- Bean curd
- Broad (fava) bean pods
- (contain dopa)
- Cheeses that are aged
- Fish – smoked, fermented, or pickled

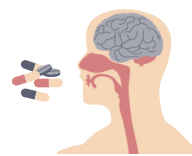
Monoamine Neurotransmitters

- After neurotransmitters send a message in the brain, they are absorbed by a protein called monoamine oxidase (monoamine transporter).
- If too many monoamines are absorbed, chemical imbalance occurs in the brain



Monoamine neurotransmitters like serotonin, norepinephrine, and dopamine are used to relay signals between nerve cells, and they regulate important functions throughout the body.

Tyramine is the building block of norepinephrine and is commonly found in foods that are aged.



When taken orally, MAOIs inhibit the metabolic breakdown of dietary amines.

Sufficient intestinal inhibition can lead to hypertensive crisis when foods containing tyramine are consumed. Similarly, it can lead to hyper-serotonemia (elevated serotonin levels) if foods containing tryptophan are consumed.

MAOIs inhibit monoamine oxidase, and then the body cannot rid itself of excess norepinephrine.

Raised levels of norepinephrine may lead to a hypertensive crisis after consumption of certain types of tyramine-containing foods or drink.

Serotonin syndrome can also occur when combining MAOIs with certain opioids like meperidine. MAOIs may not be combined with other antidepressants, most notable TCAs, because it also may result in hypertensive crisis.



Serotonin syndrome is rare but potentially life-threatening hyper-serotonergic medical condition. MAOIs and serotonergic drugs (SSRIs, MDMA, or other phenylethylamines) are likely to lead to serotonin syndrome.

