

TYRAMINE IN FOOD AND BEVERAGES

Food or Beverage	Estimated Levels ¹
Cheese	
American, processed	Low
Blue	Moderate to high
Boursault	Very high
Brick, natural	Moderate to high
Brie	Moderate to high
Camembert	Very high
Cheddar	Very high
Cottage cheese	Little or none
Cream cheese	Little or none
Emmenthaler	Very High
Gruyere	Moderate to high
Mozzarella	Moderate to high
Parmesan	Moderate to high
Romano	Moderate to high
Roquefort	Moderate to high
Stilton	Very high
Meat and Fish	
Beef liver, unrefrigerated, fermented	Moderate
Caviar	High
Chicken liver, unrefrigerated, fermented	Moderate
Fish, unrefrigerated, fermented	Moderate
Fish, dried	Moderate
Herring, dried salted	Moderate to High
Herring, pickled, if spoiled	Highest levels found
Sausages, fermented:	Very High
Bologna	
Pepperoni	
Salami	
Summer sausage	
Other unrefrigerated, fermented meats	Moderate
Alcoholic Beverages	
Beer and Ale ²	Low
Chartreuse ³	Unknown
Drambuie ³	Unknown
Sherry ³	Low
Wine, red ⁴	Low
Wine, white ⁵	Little or none
Vegetables	
Avocado, particularly if overripe	Low to moderate
Fava beans, particularly if overripe	Contain dopamine
Fruit	
Bananas	Low
Figs, canned, particularly if overripe	Low to moderate
Others	
Caffeine, very large amounts	A weak pressor agent
Chocolate, very large amounts	Contains phenylethylamine, a weak pressor agent
Yeast extracts such as Marmite ⁶	Very High

1. The tyramine content of most foods is not entirely predictable. These estimates are taken from isolated reports, some based on small samples. The amount of tyramine in food and beverages could vary with different conditions, different samples and different manufacturers.

2. Fermentation of beer does not ordinarily involve processes that produce tyramine. Some imported beers have caused reactions in patients taking MAO inhibitors.

3. Some patients have had reactions.

4. Fermentation of wine does not ordinarily produce tyramine. However, contamination with other than the usual fermenting organisms and production of appreciable amounts of tyramine has occurred in Chianti and could occur in any red wine.

5. White wine is free of tyramine because it is made without the grape pulp and seeds, which may be the source of amino acids in red wine.

6. But baked goods do not contain appreciable amounts of tyramine.