

NEUROTRANSMITTER

COFACTORS - NEED FOR CREATION

ENZYMES - THESE CAN BE MUTATED

METABOLITES - BREAKDOWN PRODUCTS

# PATHWAYS



## TYROSINE

## TRYPTOPHAN

NEEDED FOR BOTH PATHWAYS

Iron  
MTHF  
B3  
Vitamin C  
Vitamin D

L-DOPA

5-HYDROXY

TRYPTOPHAN (5-HTP)

P-5-P

P-5-P

DOPAMINE

SEROTONIN

Vitamin C  
Copper  
B3

MAO  
COMT

B2, B3  
SAmE  
Iron

B2  
B3  
Iron

MAO

metabolites

metabolites

NOREPINEPHRINE

ACETYL SEROTONIN

SAmE  
Cortisol

MAO  
COMT

B2, B3  
SAmE  
Iron

metabolites

SAmE

EPINEPHRINE

MELATONIN

MAO  
COMT

B2, B3  
SAmE  
Iron

metabolites

