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5-HT AND AGGRESSION: NEW DATA

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Aims: Growing evidence points to the conclusion that biological factors do predispose some individuals towards violent behavior. Contemporary research suggests that serotonin is a neurotransmitter associated with expressed aggression, challenging the concept of a person's knowledge of right or wrong and the free will to choose between the two.

Methods: Thorough research of the main databases (Medline, Embase, Psychinfo), and web search engines such as Goggle, Lycos for relevant studies, agencies and organizations, interested in neurotransmitter, serotonin (5-HT), aggression, hostility, violence and violent behaviour issues.

Results: The neurotransmitter serotonin (5-HT) has been implicated in the modulation of aggression in animals and humans. The 5-HT system seems to be involved in either the performance or the termination of aggressive behaviours. So although an association with serotonin and aggression appears to be present, it isn't clear the way of this association or the expression of the interplay of the genes with the individuals' environment. Genes and environment appears to be in a dynamic interplay that concludes in the observed behaviour.

Conclusions: A longstanding dogma that aggression and serotonergic activity are inversely related has to be abandoned in light of many new findings. Trait and state aggression are differentially regulated by the 5-HT system and different 5-HT receptors seem to be involved. We are still far from understanding the complex role played by the serotonergic system in the modulation of a complex set of behaviors like aggression.