Activation of hypothalamic orexin neurons is a potential mediator of
the weight gain associated with some antipsychotic drugs. Male rats
display increased Fos expression in laterally located orexin neurons.
The rhesus monkey (Macaca mulatta) provides a model to examine the
relationships between orexin neurons, weight and physical activity. Us-
ing stereology, the number of orexin-A immunoreactive neurons was
quantified in 18 male (7.6-18.3kg) and 18 female (4.8-12.2kg) mon-
keys. In females, there was no relationship between weight and me-
dial or lateral orexin-A neuron number. Conversely, in male
monkeys, higher body weight was significantly associated with less
medial orexin-A neurons (P<0.05), but the relationship with lateral
orexin-A neurons only approached significance (P=0.075). Of the 36
animals in which orexin-A neurons was estimated, activity was
monitored for 21 days via an Actiwatch-64 in 12 males and 12 fe-
male. Weight was negatively associated with activity in males
(P<0.05), but not females. Comparisons of activity to orexin-A neu-
rons revealed a significant association between higher activity levels
and greater numbers of orexin-A neurons in the medial hypothalamus
(P<0.05) but not with those in the lateral hypothalamus of males. Fe-
male showed no relationship between orexin-A neurons in either re-
gion and activity. The significant relationship between weight,
activity, and medial orexin-A neurons of males, indicates that in mon-
kids, the medially located orexin neurons may be more influential in
mediating body weight than in the rodent. (Supported by NIH Grant-
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Neurochemical markers for aggression-related personality traits
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Background: Various biological risk factors for aggressive behav-
our have been proposed, including disturbances in monoaminergic
neurotransmission, endocrine axes and central nervous system
(CNS) integrity.

Aims: To describe findings of correlations between markers of
CNS chemical integrity, neurotransmission and hormone metabolism
in relation to personality traits from forensic psychiatric investigatees
and normal subjects in a stress paradigm.

Method: Cerebrospinal fluid (CSF) and serum (S) samples from
46 forensic psychiatric investigatees and 35 healthy subjects undergo-
ing knee replacement surgery were analysed in relation to aggressive
personality traits as rated by the Karolinska Scales of Personality, the
Psychoapthy Checklist-Revised and the Temperament and Character
personality traits as rated by the Karolinska Scales of Personality, the
ing knee replacement surgery were analysed in relation to aggressive
46 forensic psychiatric investigees and 35 healthy subjects undergo-
and normal subjects in a stress paradigm.

Results: Aggressive traits were especially associated with in-
creased HVA/5-HIAA ratios, indicating a deficient serotoninergic tonic
regulation of the monoaminergic activity, and with indices of defi-
cient CNS integrity, such as increased CSF/S albumin ratios.

Conclusion: Neurobiological vulnerability factors are associated
with aggressive behavioural and personality traits.

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Time course of emotional responses: the effects of subjective ratings
of emotional intensity and voluntary suppression

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Background: Emotional regulation plays a pivotal role in socializa-
tion and personal development. However, little is known about the
time course of emotional responses and the interaction with the sub-
jective assessment of emotional intensity. The aim of this project was
to examine the time course of emotional responses to visual stimuli
when they naturally subside and when they are cognitively
suppressed.

Methods: Healthy volunteers (n=48) viewed 54 images, each
lasting for 6 sec, taken from the International Affective Picture Sys-
tem (18 positive, 18 negative, 18 neutral). In the passive condition,
subjects had to press a button to view the next image when their re-
sponse had subsided. In the active condition, subjects had to press
a button to view the next image when their response was successfully
suppressed. After each presentation, participants rated the intensity of
their response on a scale from 1 (lowest) to 9 (highest). Time to res-
olution (TTR) after image presentation and intensity ratings were av-
eraged (mean±SD).

Results: TTR (seconds) for neutral images was 7.22 ± 7.91 and
4.49 ± 5.41 for passive and active condition, respectively. For posi-
tive images, 12.1 ± 9.2 and 8.66 ± 7.13 for passive and active condi-
tion, respectively. For negative images, 15.68 ± 10.14 and 11.42 ±
8.25 for passive and active condition, respectively. TTR was statisti-
cally significantly shorter (p<0.006) for all images during suppres-
sion. TTR in both conditions correlated positively with intensity of
emotional response.

Conclusions: TTR of emotional responses to emotionally va-
enced images increases with intensity of the associated response and
decreases with voluntary suppression.

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The effect of personality dimensions on subjective and objective mea-
sures of emotional reactivity
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Background: This study explores the contribution of personality di-
ensions as a source of individual variability, to electrodermal
arousal, subjective ratings of intensity and time to resolution (TTR)
of emotional responses to affectively valenced images.

Methods: Healthy volunteers (n=48) viewed 54 images from the
International Affective Picture System equally split in positive, nega-
tive and neutral categories. Subjects pressed a button to view the
next image when their response had naturally subsided (passive condi-
tion) or following voluntary suppression (active condition) and then
rated the intensity of their response on a scale from 1 (lowest) to 9
(highest). The amplitude of the maximum peak of skin conductance
responses (SCRs) was also measured. Personality dimensions were
assessed with the Eysenck Personality Inventory (EPQ-Neuroticism,
EPQ-Psychoticism and EPQ-Extraversion).

Results: Linear regression analyses were conducted to examine the
effect of EPQ-P, EPQ-N and EPQ-P on TTR, intensity ratings,
and maximum SCR amplitude in each experimental condition.

The emotional valence of the pictures was the strongest predictor of
all 3 main outcome measures in both active and passive condition ac-
counting for 36% of the variance for TTR, 72% for the intensity ratings
and 16% for the maximum SCR amplitude. Higher EPQ-Psychoticism

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