

investigated in animal models. In man the difficulties of extrapolating from experimental pain in the laboratory to chronic pain patients is succinctly put in the critique (Loeser, 1979) of an investigation of doxepin in acute pain (Chapman and Butler, 1978). It is therefore necessary to look at clinical data.

In assessing reports of antidepressants in chronic pain it is clearly important to have information on the mood state of the patients because the presence of significant depression will influence the response of the pain symptoms to this treatment. It is partly because insufficient attention has been paid to the presence or absence of depression in patients with chronic pain that so many questions still surround the use of antidepressant drugs in such patients.

The report by Ben-Tovim and Schwartz illustrates very clearly that pain has both an affective and a cognitive component, and may be greatly influenced by the general level of emotional response. The hypoalgesia in their patients was to acute painful stimuli and one would be wary of speculating on the relevance of these findings to patients with chronic pain. Since acute and chronic pain are such different clinical entities these results are not necessarily incompatible with the common association of chronic pain and depression.

G. W. HANKS

*The Churchill Hospital,
Headington,
Oxford OX3 7JL*

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OESTROGENS, DOPAMINE AND MOOD

DEAR SIR,

The letter of Ms Skutsch (July 1981, **139**, 80) has interestingly drawn attention to evidence from animal

experiments that oestrogens interact with neural mechanisms that mediate the effects of dopamine. The reference she gives (Euvraard *et al*, 1980) documents such interactions, but does not support her contention that oestrogens act on dopaminergic neurones *per se*, or alter the turnover of dopamine. Moreover the example she gives—the rise in plasma prolactin caused by oestrogens—is thought not to be mediated by a reduction in output of dopamine but by changes in the lactotroph cells. Thus Piercy and Shin (1980) showed in the rat that while oestrogens can increase the capacity of the pituitary to synthesise and secrete prolactin by a factor of ten, the relative role of dopamine is not changed. Also Dufy *et al* (1979) showed that oestrogen causes a change in the electrical properties of prolactin-secreting cells, increasing the frequency of calcium-dependent action potentials, and perhaps also changes the receptors. The evidence from Euvraard *et al* is also that oestrogen affects the post-synaptic (cholinergic) cells in the striatum, and not dopamine turnover. Thus in both the striatum and the pituitary the recognized effects of oestrogen are on cells that are normally inhibited by dopamine.

The increase in prolactin secretion caused by oestrogen might be expected to increase rather than reduce dopamine turnover in the hypothalamus (Eikenburg *et al*, 1977).

Finally, in a neurochemical hypothesis of mental illness might it not be more physiological to refer to activity in specified neurotransmitter-pathways rather than to levels of the putative transmitter? The available evidence is compatible with the hypothesis that a dopaminergic pathway is overactive in mania (Silverstone, 1979; Post *et al*, 1980).

JOHN COOKSON

*Department of Psychological Medicine,
St Bartholomew's Hospital,
London EC1*

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CONSPICUOUS FIRESETTING IN CHILDREN

DEAR SIR,

In his article 'Conspicuous Firesetting in Children', (*Journal*, January 1981, **138**, 26-9), Strachan defined firesetting as "an event in which any type of property, however small, was consumed by fire as a result of action by the child". By investigating the records of 79 children referred to the East Edinburgh Hearing (similar to Juvenile Court in England and Wales) he has provided an important contribution to a meagre area of literature. His survey shows that in the age range studied the firesetting child who not only destroys property but also comes to the notice of the authorities is almost always a disturbed male with educational and generalized relationship difficulties from a disrupted, disturbed family (78 boys, 1 girl).

Between 1961 and 1963 I carried out a survey of 105 consecutive admissions to the Children's Burns Unit at Guys Hospital which is reported elsewhere in full (Benians, 1973) and in summary (Benians, 1974). My survey included details of eighteen firesetting children, fourteen who injured themselves and four who injured their siblings, none of whom appeared before a court for firesetting. A very different picture emerged with regard to the sex of younger firesetting children, as the majority were girls (see Table).

Details of the family backgrounds of the children in my survey showed similar disadvantages to those described by Strachan: a high proportion of one parent families, longstanding behaviour disorders, a

normal distribution of intelligence in the children and a wide variety of disorders in the parents. However six boys among the firesetting children in my survey were especially interesting. All had sustained facial burns when they peered into the petrol tanks of abandoned cars into which they had just put lighted matches. Five of these boys had both parents in the home. Four had mothers with marked obsessional, phobic personalities. Amongst all the mothers in my survey (103) six had this type of personality which reflects the usual incidence (Hare, 1965). It seemed to me that these mothers constantly spoke of danger to their families in such a way that the children were repeatedly attracted to experiment with dangerous situations, including firesetting.

TABLE

Years old	Girls	Boys	Total
0-10	7	3	10
Over 10	-	8	8
Total	7	11	18

We need to know and consider how children learn about the appropriate use and dangers of fire in normal and disturbed families.

R. C. BENIANS

3 Brodrick Road,
London SW17 7DZ

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