

FAST PAIN

- × Neothalamic pathway
- × 1° N terminate @ lamina I' and V.
- × Neurotransmitter: glutamate & neuropeptide
(among them substance P, xi)
- × 99% of 2° N terminate VPL nuclei of thalamus
- × felt within 0.5s
- × sharply localised

SLOW PAIN.

- × Paleothalamic pathway
- × 1° N terminate @ lamina II and III
- × Neurotransmitter: substance P
- × $\frac{1}{10}$ of 2° N terminate @ non-specific nuclei of thalamus
but terminate in hypothalamus, periaqueductal gray, reticular formation, telencephalon.
- × few sec later
- × poorly localised
- × persists for longer duration
- × keeps person awake [reticular formation]
- × evokes emotional response [hypothalamus]