-does not take into account the environmental and neurodevelopmental factors that are thought to influence SZP development. This was due to the fact that these advancements had not been made at the time.

(3) Howes and Kapur (2009) put forward the hypothesis that striatal dopaminergic dysfunction was the final common pathway leading to psychosis in schizophrenia.
The theory proposes that the dopamine hypothesis of schizophrenia has 4 distinctive components
1. 'Multiple hits' A genetic predisposition (i) interacting with an environmental development insult (ii) that occurs at the "right" stage (iii), all needed for developing schizophrenia. Therefore, *schizophrenia is thus dopamine dysregulation in the context of a compromised brain.*
2. The locus of dopamine dysregulation moves from being primarily at the D2R level to being at the presynaptic dopaminergic level
3. Dopamine dysregulation is linked to psychosis rather than SZP
4. Dopamine dysregulation is hypothesised to alter the evaluation of stimuli via the process of aberrant salience

The "aberrant salience" model proposes that psychotic symptoms first emerge when chaotic brain dopamine transmission leads to the inappropriate processing of stimuli that would normally be considered irrelevant. This ultimately leads to irrelevant stimuli becoming more prominent which provides a basis for psychotic phenomena such as ideas of reference, leading to paranoid behaviour and persecutory delusions.

The implications of this theory mean that current antipsychotic drugs are failing to treat the primary abnormality and are instead acting downstream. They may paradoxically worsen the primary abnormality by blocking presynaptic D2 receptors, resulting in a compensatory increase in dopamine synthesis. This may act as an explanation as to why patients relapse rapidly upon medication cessation.

Evidence:
Since version II, there have been over 6700 articles about dopamine and schizophrenia. Howes & Kapur selectively reviewed this data to provide an overview of the 5 critical streams of new evidence as mentioned above to support their theory: (1) Neurochemical imaging studies
-Using radiolabelled L-dopa to measure synthesis and storage of DA in presynaptic terminals of the striatum.
-PET and SPECT to measure striatal synaptic DA transmission
(2) Genetic evidence
-4 of the top 10 gene variants most associated with SZP are directly involved in dopaminergic pathways
(3)
a) Findings on environmental risk factors
-psychoactive substances
b) interaction between environmental/genetic factors
-social isolation rearing potentials effects of stimulants and stress on the DA system
-family history of psychosis (Vans Os et al., 2003/2004)
(4) Research into the "extended phenotype"
-Early signs or 'prodrome' of the illness
(5) Animal studies.

-Reward learning task compared a group of patients with active psychotic symptoms with a group of controls and the mesolimbic responses were captured using fMRI. This allowed the researchers to establish a relationship between reward prediction error and mesolimbic activity in healthy and psychotic individuals. show reduced activation in the mesolimbic