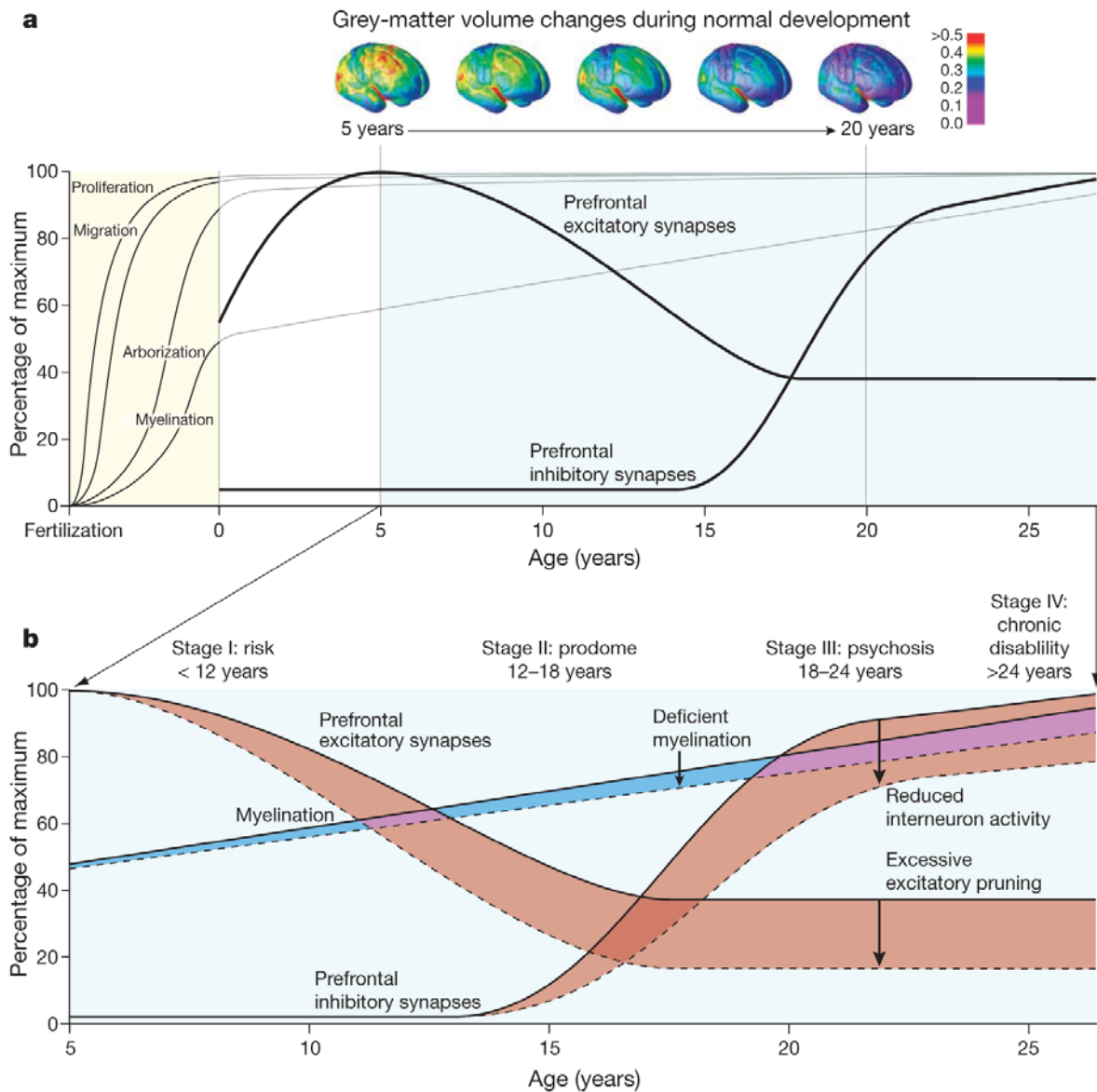


Weakness

Physiology of schizophrenia

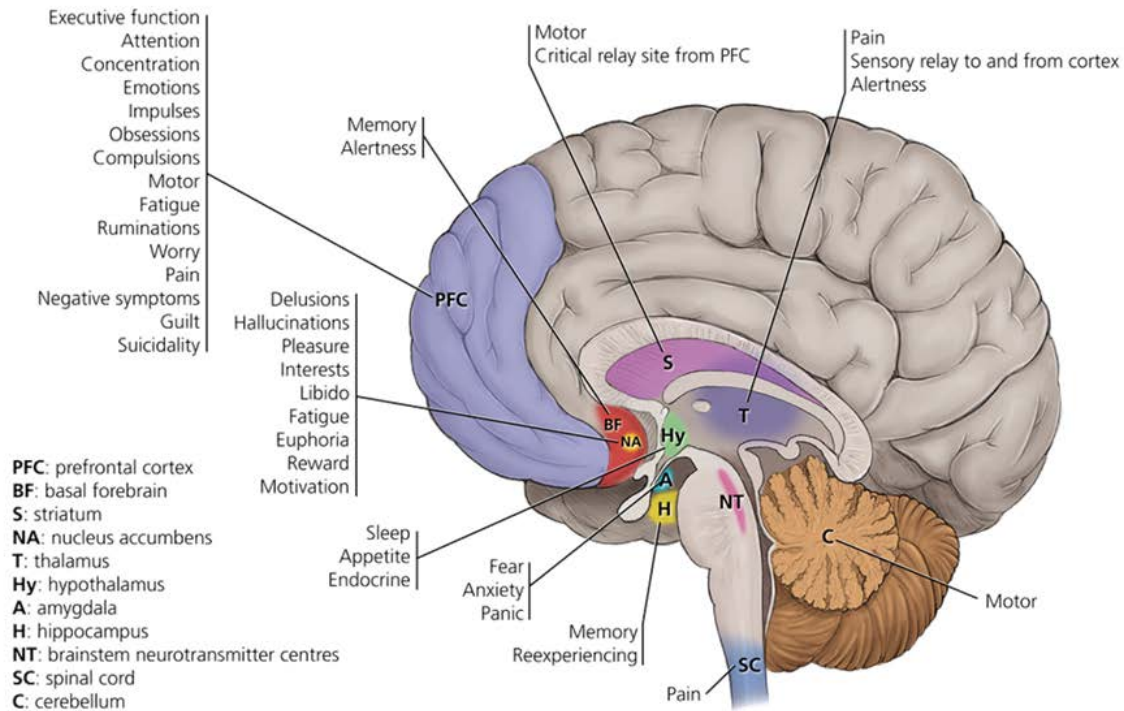
Recent understanding of schizophrenia and brain neurodevelopment can help health providers better understand what may be causing many of the symptoms and disordered behaviours.



Behaviour and the brain

Although early in our understanding, different symptoms such as delusions or hallucinations, or other psychotic symptoms, are associated with areas in the brain involved in processing. This is similar to the medical neurologic diagnostic thinking of “Where is the lesion? What is the lesion?” So psychotic symptoms and signs are real and outward, not made up or moral weakness, and they can be similarly understood and safely managed by health providers who assess and treat persons suffering from any other condition.

Key Behaviours Hypothetically Linked to Specific Brain Regions



Adapted from Stahl. *Essential Psychopharmacology* 2008, 3rd ed

Reference:

1. Stahl S. *Essential Psychopharmacology* 2008, 3rd edition.
<http://stahlonline.cambridge.org/>. Last accessed: Jun 29, 2010.

Narration:

Certain human behaviors are believed to be linked to various areas of the brain. These behaviors quite frequently represent symptoms of mental illness. Over the past several years we have gained an enormous amount of knowledge regarding the specific areas of the brain and the symptoms that seem to originate from these brain regions. Although this work is by no means complete, this information can be used clinically to help us select appropriate therapy for our patients who are suffering with mental illness.

For example, executive functioning, attention and concentration have been linked to the prefrontal cortex. The neurons that innervate this area of the brain originate in the midbrain. These neurons may be serotonergic, dopaminergic or noradrenergic. In the case of executive functioning, attention and concentration, it appears that norepinephrine and dopamine play a critical role.

As we look at the symptoms of depression there is some evidence to support the fact that various brain regions and projections to these regions may be responsible for the symptoms.

Morbidity/mortality in Schizophrenia

- The most common cause of morbidity and mortality for persons suffering from schizophrenia is cardiac conditions
- Persons with schizophrenia and severe mental health problems have difficulty accessing care and receive lower quality physical health care

People with mental illness:

- High frequency utilization of the health care system, such as emergency departments (Druss, 2007)
- Underutilize primary care services
 - Use less primary health care than patients without mental health issues (Chwastiak, et al., 2008)
 - Fewer than ½ with a severe mental disorder consult their primary care physician (Fleury, et al., 2010).
- Report having substantively unmet medical needs and poor access to primary care (Levinson, et al., 2003)
- Preventative & screening health services received by mental health patients are often of poorer quality than received by those without a presenting mental health issue (Lord, Malone, & Mitchell 2010)

Increased rates of mortality

- This lack of access, inequality in care & high rates of comorbidity lead to increased mortality (Cole, 2007; Felker, Yazel, & Short, 1996; Mitchell, & Lord, 2010)
- Deficits in the quality of cardiac care contributed to higher than expected mortality rates for individuals with schizophrenia (Systematic review: Mitchell & Lord, 2010)