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SCHIZOPHRENIA Factsheet

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What are extrapyramidal side effects?

Extrapyramidal side effects include dyskinesias; repetitive, involuntary, and purposeless body or facial movements. Parkinsonism may occur, involving cogwheel muscle rigidity, pill-rolling tremor and reduced or slowed movements. Akathisia involves motor restlessness, especially in the legs, and dystonias are muscle contractions causing unusual twisting of parts of the body, most often in the neck. These side effects are caused by the dopamine receptor antagonist action of antipsychotics.

What is the evidence for extrapyramidal side effects?

Overall prevalence rates

Moderate quality evidence finds the overall prevalence of extrapyramidal symptoms in people taking antipsychotics is around 37%. Parkinsonism prevalence is 20%, akathisia prevalence is 11%, and tardive dyskinesia prevalence is 7-25%. The rates of tardive dyskinesia is highest with first generation antipsychotic use and with longer duration of illness. Rates were lowest in Asian countries.

All antipsychotics versus placebo

Moderate quality evidence shows a small effect of fewer extrapyramidal side effects with clozapine than placebo. Small effects of increased extrapyramidal side effects were reported with ziprasidone, paliperidone, and risperidone, and medium-sized effects were reported with lurasidone, chlorpromazine, zotepine, and haloperidol. No differences in extrapyramidal side effects were reported for sertindole, olanzapine, quetiapine, aripiprazole, iloperidone, amisulpride and asenapine when compared to placebo.

First versus second generation antipsychotics

Moderate to high quality evidence suggests fewer extrapyramidal side effects with second generation antipsychotics, in particular olanzapine and risperidone, when compared to first generation antipsychotic haloperidol. Fewer extrapyramidal side effects were reported with second generation antipsychotic clozapine when compared to first generation antipsychotic chlorpromazine. Moderate quality evidence suggests clozapine, olanzapine, and risperidone produce fewer extrapyramidal side effects than low-potency first generation antipsychotics.

Second generation antipsychotics

Moderate to high quality evidence suggests risperidone may be associated with more use of antiparkinson medication than clozapine (medium-sized effect), olanzapine, quetiapine, and ziprasidone (small effects). Ziprasidone may be associated with more use of antiparkinson medication than olanzapine (small effect) and quetiapine (medium-sized effect). Olanzapine may be associated with more use of antiparkinson medication than quetiapine (medium-sized effect), and aripiprazole may be associated with more use of antiparkinson medication than olanzapine (small effect). No differences were found between amisulpride and olanzapine, risperidone, or ziprasidone. No differences were found between aripiprazole and risperidone, or between clozapine and olanzapine or ziprasidone. Low quality evidence is unable to determine if there are differences between zotepine and clozapine.

Schizophrenia versus affective disorders

Moderate quality evidence suggests people with affective disorders treated with aripiprazole may show more akathisia than people with schizophrenia treated with aripiprazole. People with schizophrenia treated with olanzapine may show more parkinsonism than people with bipolar disorder treated with olanzapine.

Ethnic differences

Moderate to low quality evidence suggests people from China, Japan and Korea who are treated with antipsychotics may show a small increase in extrapyramidal side effects compared to people from other countries treated with antipsychotics. No differences were reported between Black and White populations.

For more information see the technical table

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NeuRA (Neuroscience Research Australia) is one of the largest independent medical and clinical research institutes in Australia and an international leader in neurological research.

Diseases of the brain and nervous system pose the greatest health, economic and social burden of any disease group because they are chronic, debilitating and have no known cures.

Medical research is the cornerstone of efforts to advance the health and wellbeing of families and the community. Our dedicated scientists are focussed on transforming their research into significant and practical benefits for all patients.

While we hope you find this information useful, it is always important to discuss any questions about schizophrenia or its treatment with your doctor or other health care provider.

HOW YOUR SUPPORT HELPS

We are able to make significant advances due to the generosity of countless people. Your donation allows us to continue to work towards transforming lives. For information on how you can support our research, phone **1300 888 019** or make a secure donation at **neura.edu.au/donate**.

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