

Using Drugs to Improve the Behavior of People with Autism: A Skeptical Appraisal

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In a 2010 study of 60,641 children Mandell et al. found that:

- 56% used at least one psychotropic drug
- 20% used three or more psychotropic drugs

In a 2013 study of 33,565 children Spencer et al. found that:

- 64% filled a prescription for at least one drug
- 35% filled a prescription for two or more drugs
- 15% filled a prescription for three or more drugs

In a 4.5-year longitudinal study of 286 adolescents and adults published in 2009, Esbensen et al. found that:

- 70% were receiving one or more psychotropic drugs when the study began
- 81% were taking one or more psychotropic drugs when the study ended

Typical antipsychotics

chlorpromazine (Thorazine)

haloperidol (Haldol)

perphenazine (generic only)

fluphenazine (generic only)

Atypical antipsychotics

risperidone (Risperdal)

olanzapine (Zyprexa)

quetiapine (Seroquel)

ziprasidone (Geodon)

aripiprazole (Abilify)

paliperidone (Invega)

lurasidone (Latuda)

SSRI Antidepressants

fluoxetine (Prozac)

citalopram (Celexa)

sertraline (Zoloft)

paroxetine (Paxil)

escitalopram (Lexapro)

SNRI Antidepressants

venlafaxine (Effexor)

duloxetine (Cymbalta)

Other Antidepressants

bupropion (Wellbutrin)

“Irritability,” quantified by the Aberrant Behavior Checklist (ABC), includes responses such as aggression toward others, deliberate self-injury, temper tantrums, and quickly changing moods.

Please rate the child's behavior for the last 4 weeks according to the scale below:

0 = Not at all a problem

1 = The behavior is a problem, but slight in degree.

2 = The problem is moderately serious.

3 = The problem is severe in degree.

First Five ABC Items

1. Excessively active at home, school, work, or elsewhere.
2. Injures self on purpose.*
3. Listless, sluggish, inactive.
4. Aggressive to other children or adults (verbally or physically).*
5. Seeks isolation from others.

*Irritability measure

ABC Factors (sub-scales)

- Irritability, Agitation, and Crying
- Lethargy/Social Withdrawal
- Stereotypic Behavior
- Hyperactivity/Noncompliance
- Inappropriate Speech

Limitations of the Research Literature

1. Poor outcome measures
2. No long-term studies
3. Weak data analysis
4. Inadequate experimental designs or controls
5. Inconsistent results
5. Little comparative research
6. Few studies of combination therapies
7. Few studies of drug combinations

Williams et al. (2011) Cochrane Review

Seven RCTs with a total of 271 participants were included. Four SSRIs were evaluated: fluoxetine (two studies), fluvoxamine (two studies), fenfluramine (two studies) and citalopram (one study). Five studies included only children and two studies included only adults. Varying inclusion criteria were used with regard to diagnostic criteria and intelligence of participants. Seventeen different outcome measures were reported. Although more than one study reported data for Clinical Global Impression (CGI) and obsessive-compulsive behaviour (OCB), different tool types or components of these outcomes were used in each study. As such, data were unsuitable for meta-analysis. One large, high quality study in children showed no evidence of positive effect of citalopram. Two small studies in adults showed positive outcomes for CGI and OCB; one study showed improvements in aggression, and another in anxiety.

There is no evidence of effect of SSRIs in children and emerging evidence of harm. There is limited evidence of the effectiveness of SSRIs in adults from small studies in which risk of bias is unclear.

There is no evidence that any medication reduces the core symptoms of autism or produces long-term benefits of any sort in people with autism.

There is some evidence that several drugs can produce short-term improvements in problem behaviors.

For example, Siegel and Matthews (2011) evaluated 33 randomized controlled trials and concluded:

“ In children, risperidone and aripiprazole have established evidence for treatment of irritability and hyperactivity, haloperidol has established evidence for the treatment of negative behavioral symptoms, and aripiprazole also has established evidence for treatment of stereotypy. A number of other compounds have acquired promising or preliminary evidence ratings.”

McPheeters et al. (2011) summary

“Evidence supports the benefit of risperidone and aripiprazole for challenging and repetitive behaviors in children with ASD. Evidence also supports significant adverse effects of these medications. Insufficient strength of evidence is present to evaluate the benefits or adverse effects for any other medical treatments for ASDs, including serotonin-reuptake inhibitors and stimulant medications.” (p. 1312)

- Bryson, Rogers, and Fombonne (2003) write:
"There is no curative treatment for autism, and psychotropic drugs have only a minimal role to play in its management. As a rule, drugs should be used sparingly and only when other strategies to reduce maladaptive behaviours have been properly tried and have failed to bring about desired changes" (p. 517).

- Myers and Johnson (2007) offer a similar recommendation with respect to drug treatments: "After treatable medical causes and modifiable environmental factors have been ruled out, a therapeutic trial of medication may be considered if the behavioral symptoms cause significant impairment in functioning and are suboptimally responsive to behavioral interventions" (p. 1171).

CDC Recommendation:

- There are no medications that can cure ASD or treat the core symptoms. However, there are medications that can help some people with ASD function better. For example, medication might help manage high energy levels, inability to focus, depression, or seizures.
- Medications might not affect all children in the same way. It is important to work with a health care professional who has experience in treating children with ASD. Parents and health care professionals must closely monitor a child's progress and reactions while he or she is taking a medication to be sure that any negative side effects of the treatment do not outweigh the benefits.

Golnik, A., Ireland, M., & Borowsky, I. W. (2009)

“Primary care physicians report a lack of self-perceived competency, a desire for education, and a need for improvement in primary care for children with autism. Physician education is needed to improve primary care for children with autism.” (p. 966)

Drugs are not a panacea and they are restrictive.
For example, risperidone can cause or contribute to:

- Insomnia or Drowsiness
- Abdominal pain and Nausea
- Fatigue
- Gynecomastia
- Fever
- Orthostatic hypotension
- Heart problems
- Motor disturbances
- Weight gain and Type II diabetes

Appropriate drug use entails:

1. Ensuring that drug treatment is likely to be better than alternative treatments.
2. Ensuring that the goals of drug treatment are clear and in the client's best interest.
3. Ensuring that treatment decisions are made on the basis of real drug effects.
4. Ensuring that drug therapy is flexible and integrated with other interventions.