STATE OF MINNESOTA
COUNTY OF DAKOTA

DISTRICT COURT
FIRST JUDICIAL DISTRICT
PROBATE DIVISION

In the Matter of the Civil Commitment of:
Charles Helmer,
Respondent

Court File Number: 19HA-PR-20-939

ANN FULLER'S BRIEF IN SUPPORT OF INJUNCTION AGAINST FURTHER ADMINSTRATION OF ELECTROCONVULSIVE THERAPY AND NEUROLEPTIC DRUGS ON CHARLES HELMER

TO: THE COURT AND THE UNIVERSITY OF MINNESOTA HEALTH FAIRVIEW RIVERSIDE HOSPITAL

FACTS

On 12/29/20, a petition was filed with the Dakota County District Court to authorize for electroconvulsive treatment (ECT) on Charles Helmer. *See Petition by Dr. Alexandra Hartley*. The petition was brought By Minnesota Health Fairview Hospital and it was prepared by Dr. Alexandra Hartley. *Id*. It was stated in the petition that the benefits of ECT outweighed the costs of said treatment. *Id*. The petition furthermore stated that the effect of ECT varies and that for schizophrenic patients, the success can be only as high as 50%. *Id*. The most profound problem with ECT is its effects on memory. *See Affidavit of Dr. Lee Coleman*. The negative effects on memory are both anterograde and retrograde (trouble remembering events that happened before the application of ECT and also trouble committing to memory events that happened after ECT). *See Petition by Dr. Alexandra Hartley*. Other problems of ECT include confusion, disorientation, dysaithric speech, lack of verbal spontaneity. and apathy. *Id.*

An order authorizing ECT was given in January 2021. *See January 8th Judicial Order.* Since starting ECT, Charles has suffered severe mental and health consequences. *See Affidavit of Charles Helmer.* He has Ocular Gyro Crisis, wherein his eyes stay up for a prolonged period of time. *Id*. Furthermore, his memory has been negatively affected. *Id*. He has trouble remembering things and is concerned that he may lose his ability to commit things/events to memory in the future. *Id*. Charles also feels very tired and unmotivated. *Id*. He is much more tired than he used to be before ECT started. *Id*. Finally, Charles is much less motivated to do his daily activities. *Id*. It should be noted that the main purpose of ECT was to help Charles do a better job at finishing his daily chores. *See Petition by Dr. Alexandra Hartley*. But ECT is having the exact opposite effect. *See Affidavit of Charles Helmer*. As such, Charles believes that it is best for ECT to be discontinued. *Id*.

Charles is also on Zyprexa and Cogentin at the moment. Charles believes that these drugs are not having any positive impacts on his mind and body, but that they are actually making him more unmotivated and lethargic. *Id*. It has also been shown that neuroleptic drugs such as Zyprexa are actually less likely to have any positive effects on a patient than if the patient were to just not be medicated with any neuroleptic drug. *See Affidavit of Robert Whittaker*. It has also been shown through various scientific studies that patients taking neuroleptic drugs are less likely to recover in the long run than their counterparts who are not on said neuroleptic drugs. *Id*.

ISSUES

I. The issue here is whether or not a preliminary injunction should be granted against further involuntary administration of electroconvulsive therapy on Charles Helmer

II. The issue here is whether or not a preliminary injunction should be granted against further involuntary administration of antipsychotic/neuroleptic drugs such as Zyprexa on Charles Helmer

SHORT ANSWERS

I. A preliminary injunction should be granted against further ECT on Charles Helmer because Mr. Helmer has suffered irreparable injury. He has suffered severe physical and mental injuries already. *See Affidavit of Charles Helmer*. His memory has been negatively affected and he is also suffering from Ocular Gyro Crisis. *Id*. Furthermore, the injunction should be granted because the balance of harm is strongly in favor of discontinuing further ECT because continuing administration of ECT is likely to further exacerbate the injury to his memory while it is unlikely that Mr. Helmer would suffer any worse repercussions from discontinuing ECT as the therapy is not helping him do his daily activities any better than he was able to do them prior to starting ECT. Lastly, it is likely that Ms. Fuller would likely be able to show that a permanent injunction on ECT is warranted on the merits because Mr. Helmer has suffered irreparable mental/physical injury, there is no adequate monetary remedy since he will have suffered irreparable injury, the balance of harm is in favor of discontinuing ECT, and the public interest is not implicated in this case.

II. A preliminary injunction should be granted against further administration of neuroleptics on Mr. Helmer because he has been irreparably injured. He has suffered severe physical and mental injuries already. Mr. Helmer has been on several drugs including Cogentin and Zyprexa. The neuroleptic drugs that is involuntarily being given to Mr. Helmer is causing him to be extremely tired and unmotivated. *See*

Affidavit of Charles Helmer. He has also been having trouble going through his daily chores. *Id*. The balance of harm is also in favor of discontinuing further administration of neuroleptics because said neuroleptics are not having the desired effect of assisting Mr. Helmer finish his day-to-day activities better. *See Affidavit of Charles Helmer*. Furthermore, Mr. Helmer is unlikely to be negatively affected from discontinuing the administration of neuroleptics because said neuroleptics are reducing his likelihood of making long-term recovery and causing a host of physical, emotional, and mental side effects on him. *See Affidavit of Robert Whittaker*. Ann Fuller is also likely to succeed on the merits to get a permanent injunction on administration of neuroleptics because Mr. Helmer has suffered irreparable physical and mental consequences. *See Affidavit of Charles Helmer.* There is no adequate monetary relief available, and the balance of harm is in favor of discontinuing administration of neuroleptics. Lastly, the case at hand is not likely to implicate the public interest.

DISCUSSION

I. Preliminary injunction. against further administration of ECT should be granted because Charles has suffered irreparable injury in that his memory has been greatly affected, the balance of harm is in favor of Charles as he would be spared from life-threatening repercussions while no one else in the lawsuit is likely to be affected, movant is likely to succeed on the merits, and public interest is not likely to be negatively impacted

The issue here is whether or not a preliminary injunction should be granted to stop further electroconvulsive therapy on Charles Helmer. The four-factor test to determine whether a preliminary injunction is appropriate considers: 1) threat of irreparable harm to movant; (2) state of the balance between this harm and the injury that granting the injunction will inflict on other

litigants in the case; (3) probability that movant will succeed on the merits; and (4) the public interest. *Home Instead Inc. v. Florance*, 721 F.3d 494 (8th Cir. 2013). An analysis of each of the factors is as follows:

1. Threat of irreparable harm to Charles: If the injunction is not granted, there is significant threat of irreparable harm to Charles. Dr. Alexandra Hartley in the petition to impose ECT on Mr. Helmer has stated that ECT can lead to loss of memory. *See Petition for Authorization for Imposition of Electroconvulsive Therapy*. Therefore, if ECT continues then there is the threat that Mr. Helmer could permanently lose both his memory as well as suffer harm in his ability to commit to memory events that will happen in the future. Furthermore, due to the nature of ECT, it is likely that Mr. Helmer will be continuously subjected to ECT. *See Affidavit of Dr. Lee Coleman*. ECT simply masks depressive symptoms in a patient in the short-term. *Id.* The symptoms come back once ECT is discontinued and therefore further doses of ECT would have to administered to again mask the patient's depressive symptoms in the short run. *Id*. As such, Charles would continuously be subjected to ECT. The gravest risk of irreparable harm stemming from perpetual ECT is that Charles might become a long-term brain injured person. *Id.*
2. The balance of harm between the one suffered by the movant and the one suffered by other litigants if the injunctions is granted: In this case, as outlined in the analysis of the first factor, the possibility of harm that can be suffered by Mr. Helmer is very grave. He is at threat of losing his memory as well as potentially be a long-term brain-dead individual. *See Affidavit of Dr. Lee Coleman*. On the other hand, if the

injunction is granted, then there is no likelihood of harm to any other parties in this lawsuit. In the December 10th, 2020 court order, the court has acknowledged that Mr. Helmer mostly keeps to himself and does not engage with others. *See Dec 10, 2020 Judicial Order.* The issue of Mr. Helmer calling the police to help him move furniture warrants some discussion here. One of the bases for the December 10th, 2020 court order to civilly commit Mr. Helmer was that he had called emergency services to help him move furniture. *Id*. While it is inappropriate, it is to be noted that it is not a crime to call the police to help move furniture. While it is true that Mr. Helmer stated that he was going to stab someone if the police did not come to his house to assist him, it should be highlighted that there is no evidence that Mr. Helmer was ever actually going to physically assault anyone. In poor judgment, he simply said that he was going to stab someone to absolutely ensure that the police came to assist him in re-plugging the refrigerator. He was scared that the Thanksgiving food in the refrigerator was going to go bad and he wanted to prevent that from happening. The situation in retrospect shows that Mr. Helmer was never a threat in any way to anyone. As such, it cannot be said that Mr. Helmer would be a threat to anyone else in this lawsuit. Therefore, this factor is also in favor of granting a preliminary injunction against further ECT on Mr. Helmer.

Furthermore, discontinuation of ECT is unlikely to cause any harm on Mr. Helmer himself. In fact, the discontinuation is likely to benefit Mr. Helmer because his memory would no longer deteriorate. Mr. Helmer has been having trouble remembering things and events as a side effect of ECT. *See Affidavit of Charles*

Helmer. Therefore, it stands to reason that once ECT is discontinued the aforementioned memory loss would stop. As such, the balance of harm is in favor of discontinuing ECT

3. Probability that the movant will succeed on the merits: Movant's eventual goal is to get a permanent injunction against ECT on Mr. Helmer. The United States Supreme Court has outlined the four-factor test that needs to be applied for a permanent injunction analysis. The movant needs to show that 1) he has suffered an irreparable injury, (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury, (3) considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted, and (4) the public interest would not be disserved by a permanent injunction. *Monsanto v. Geertson Seeds*, 561 U.S. 139 (2010). First, Mr. Helmer has already suffered irreparable injury because he has Ocular Gyro Crisis, wherein his eyes stay up for a prolonged period of time. *See Affidavit of Charles Helmer.* His memory has also been severely negatively affected due to the ECT; he has trouble remembering things and events. *Id.* Second, monetary damages are not adequate in this case as the harm that Mr. Helmer is being threatened with is irreversible and cannot be compensated by any monetary amount. Therefore, the equitable remedy of injunctive relief is needed in this case. Third, the balance of hardship is heavily in Mr. Helmer's favor. Mr. Helmer is the one who is potentially at risk of suffering severe damage to his memory and therefore if an injunction is not given then Mr. Helmer will have suffered severe injuries to memory. He is also at risk of being a long-term brain-dead individual and if an injunction is not granted then Mr.

Helmer will have suffered severe brain damage. Fourth, public interest is unlikely to be implicated in this matter involving an injunction against ECT on Mr. Helmer. As such, it cannot be concluded that the public interest will be disserviced by a permanent injunction.

It should also be noted that there is no requirement to show a specific mathematical probability by which the movant is likely to be successful on the merits. *Dataphase Systems, Inc. v. C L Systems, Inc.* 640 F.2d 109 (8th Cir. 1981). Each case is to be judged on its own unique circumstances. *Id*. If the movant has raised a substantial question and the equities are strongly in his favor, then the need for showing of success is less. *Id*. In balancing the equities, no single factor is determinative. *Id*. The likelihood that the movant will ultimately prevail is meaningless in isolation. *Id*. In every case, it must be examined in the context of the relative injuries to the parties and the public. *Id.* In this case, the equities are strongly in Mr. Helmer's favor. He is being electrocuted against his will. *See January 8th, 2021 Judicial Order*. The medical evidence shows that there is a substantial risk that he will suffer from grave and life-threatening heath consequences. *See Petition by Dr. Hartley for Authorization to impose ECT*. Since the equities are strongly in Mr. Helmer's favor, the need to show that movant will succeed on the merits is less. Also, no other party in this lawsuit will be injured if preliminary injunction was to be granted. But Mr. Helmer would be spared from the threat of the severe health repercussions of ECT if administration of ECT was to be discontinued for the time being. As such, this factor is also in movant's favor.

4. Public Interest: As discussed in the analysis of the previous factor, the public interest is unlikely to be implicated in this case. Henceforth, the public interest is not disserved by a preliminary injunction.

In summary, preliminary injunction against ECT on Mr. Helmer should be granted because he has already suffered serious health consequences and is at the risk of suffering irreparable injury, the balance of harm among the parties in the lawsuit is strongly in favor of Mr. Helmer, and movant is likely to succeed on the merits. The issue of public interest is not implicated in the present case.

II. A preliminary injunction against administration of neuroleptic drugs should be granted because Mr. Helmer has suffered irreparable injury to his memory and cognitive capacities, the balance of harm is in favor of discontinuing administration of neuroleptic drugs, movant Ann Fuller will be able succeed on the merits to get a permanent injunction, and public interest is not implicated in this case

The issue here is whether or not a preliminary injunction should be granted against the further administration of neuroleptics on Mr. Helmer. As stated in the discussion of the prior issue, the four-factor test to determine whether a preliminary injunction is appropriate considers: 1) threat of irreparable harm to movant; (2) state of the balance between this harm and the injury that granting the injunction will inflict on other litigant; (3) probability that movant will succeed on the merits; and (4) the public interest. *Home Instead Inc. v. Florance*, 721 F.3d 494 (8th Cir. 2013). An analysis of each of the factors is as follows:

1. Threat of irreparable harm to Mr. Helmer: If neuroleptics such as Zyprexa is continued to be administered on Mr. Helmer, then he will be at risk of severe mental and physical

repercussions. As is outlined in the affidavit of Dr. Robert Whittaker, the chances of long-tern recovery for people receiving neuroleptic medication are lower than that of their counterparts who are not on such medication. *See Affidavit of Robert Whittaker*. Scientific studies have shown that while neuroleptics work in the short-term (about 6 weeks), the chances of relapse into psychosis for patients that are on neuroleptics are actually higher than that of the ones who are not taking said neuroleptics. *Id.* It should also be noted that the body of scientific literature on schizophrenia also shows that when use of antipsychotic drugs is minimized, the patient's chance of staying free of schizophrenic symptoms is actually higher than others that have been taking a higher dose of antipsychotic medications. *Id*. Furthermore, Charles is also feeling very tired and unmotivated since he has started taking the neuroleptics. *See Affidavit of Charles Helmer*. UCLA psychiatrist Theodore Van Putten reported that most patients on antipsychotics spend their lives in "virtual solitude, either staring vacantly at television, or wandering aimlessly around the neighborhood, sometimes stopping for a nap in a lawn or a park bench . . . they are bland, passive, lack initiative, have blunted affect, make short, laconic replies to direct questions, and do not volunteer symptoms . . . there is a lack not only of interaction and initiative, but of any activity whatsoever. The quality of life on conventional is very poor." *See Affidavit of Robert Whittaker*. As such, due to the irreparable physical, mental, and emotional injury that Mr. Helmer is at risk of, further administration of antipsychotics/neuroleptics should be discontinued.

2. Balance of harm: The balance of harm is strongly in favor of discontinuing further administration of neuroleptics. First, no one else in the lawsuit is likely to suffer from any harm if Charles is no longer given antipsychotic drugs/neuroleptics. Second, Charles

himself is likely to benefit from discontinuing neuroleptics. His long-term recovery chances are likely to increase, and he would also have a lower chance of relapse into psychosis. *Id*. Furthermore, the side effects caused by the medication such as lethargy and lack of motivation is also likely to disappear once the antipsychotic medication is discontinued.

3. Probability that the movant will succeed on the merits: Ann Fuller is likely to succeed on the merits to get a permanent injunction against further administration of antipsychotic drugs on Mr. Helmer because Mr. Helmer has suffered irreparable injury and is at risk of suffering further injury if administration of antipsychotic drugs is not discontinued. He is suffering from one of the most common symptoms of neuroleptics—severe lethargy and lack of motivation. *See Affidavit of Charles Helmer*. Charles is finding it very difficult to complete his day-to-day activities. *Id*. He is also suffering from Ocular Gyro Crisis, wherein his eyes stay up for a prolonged period of time. *Id.* There is no monetary appropriate relief that can be awarded to Mr. Helmer. There is no monetary tag that can be put on his ability to finish his daily chores. Permanent injunction is also likely to be awarded based on the balance of hardship because no one else in the lawsuit is likely to be harmed from discontinuing antipsychotic medication for Mr. Helmer. Mr. Helmer himself is likely to benefit from the discontinuation because it would increase his chances of making long-term recovery and reduce chances of relapse. Lastly, public interest is not implicated in this case. As such, public interest will not be disservice by the injunction.
4. Public Interest: As discussed in the analysis of the previous factor, the public interest is unlikely to be implicated in this case. Henceforth, the public interest is not disserved by a preliminary injunction.

In summary, preliminary injunction should be granted against further administration of antipsychotic drugs/neuroleptics on Mr. Helmer because he is at risk of severe mental and physical injury. The balance of harm is in favor of discontinuing administration of neuroleptics as Mr. Helmer is likely to be benefited from the discontinuation and no one else in the lawsuit is going to harmed by said discontinuation. The movant is also likely to succeed on the merits to get a permanent injunction because Mr. Helmer has suffered irreparable physical and mental injuries, there is no adequate monetary relief that can be provided to compensate Mr. Helmer for the severe injuries that he has suffered, the balance of harm is in favor of discontinuing administration of antipsychotic drugs as Mr. Helmer is likely to benefit from the discontinuation and no one else in the lawsuit will be harmed by said discontinuation. Finally, preliminary injunction should be granted because public interest is not implicated and therefore will not be disserviced by the discontinuation.

CONCLUSION

In conclusion, preliminary injunction should be granted because Mr. Helmer is at grave risk of irreparable injury to his memory. He is also at risk of being a long-term brain-dead person from repetitive ECT. *See Affidavit of Dr. Lee Coleman*. Furthermore, the balance of harm is strongly in Mr. Helmer's favor as no other party could possibly be harmed from the preliminary injunction, Movant is also likely to succeed on the merits and get a permanent injunction because the equites are heavily in Mr. Helmer's favor and as such the need to show a strong likelihood of

success on the merits is less. Finally, public interest is not implicated in the present case. Since, the four-factor test is in favor of Mr. Helmer, preliminary injunction should be granted.

RESPECTFULLY SUBMITTED ON MAY 13, 2021

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STATE OF MINNESOTA
COUNTY OF DAKOTA

DISTRICT COURT
FIRST JUDICIAL DISTRICT
PROBATE DIVISION

In the Matter of the Civil Commitment of:
Charles Helmer,
Respondent

Court File Number: 19HA-PR-20-939

AFFIDAVIT OF CHARLES HELMER

STATE OF MINNESOTA)
) ss
COUNTY OF DAKOTA)

I, Charles Helmer, first being duly sworn state as follows:

1. My name is Charles Helmer
2. I have been civilly committed since December 10th, 2020 at University of Minnesota Medical Center-Fairview
3. I have been undergoing Electroconvulsive Therapy (ECT) pursuant to a Court Order from January 8th, 2021
4. Since the start of ECT, I have experienced several negative health effects, both physical and mental
5. I have Oculargyro Crisis, wherein my eyes stay up for a prolonged period of time
6. I also do not believe that ECT is having its supposed positive effects on me. ECT was supposed to help me do my day-to-day activities better but it is not making me feel any better or assisting me in doing my daily activities better.

7. I also feel very bored and unmotivated. Before ECT was started, I used to have a lot more energy and motivation to take on the day's activities. But now I do not have nearly the same energy.
8. I also get headaches very often and spend a large portion of my day sleeping.
9. I also believe that my memory has been negatively affected. I am having a more difficult time remembering events. Furthermore, I am concerned about the long-term loss of my memory as well as potentially being unable to commit future events to memory, which is a potential negative consequence of ECT.
10. Since ECT is not rendering its expected positive benefits for me and instead is causing negative effects on my mind and body, I believe that it should be discontinued.

FURTHER YOUR AFFIANT SAYETH NOT

Date: Apr 22, 2021

Charles Helmer (Apr 22, 2021 16:28 CDT)

Charles Helmer

STATE OF MINNESOTA
COUNTY OF DAKOTA

DISTRICT COURT
FIRST JUDICIAL DISTRICT
PROBATE DIVISION

In the Matter of the Civil Commitment of:
Charles Helmer,
Respondent

Court File Number: 19HA-PR-20-939

DR. LEE COLEMAN'S AFFIDAVIT IN SUPPORT OF INJUNCTION AGAINST FURTHER ADMINSTRATION OF ELECTROCONVULSIVE THERAPY AND NEUROLEPTIC DRUGS ON CHARLES HELMER

I, Dr. Lee Coleman, first being duly sworn state the following:

1. My full name is Lee Coleman
2. I have a Doctor of Medicine Degree from the University of Chicago School of Medicine
3. I completed by residency in Adult and Child Psychiatry from the University of Colorado School of Medicine
4. I have been a staff psychiatrist for the Unites States Air Force and the Permanente Medical Group in California.
5. I have been in private practice in adult and child psychiatry from 1974 to 2007
6. I have reviewed the medical and legal records of Charles Helmer
7. It is my opinion that the treatment plan in place is one that has not promoted his best interests and should be reevaluated
8. Charles Helmer has been the recipient of treatment that places primary emphasis on biological methods, namely Electroconvulsive Therapy (ECT) and psychoactive drugs. The problem here is that the clearly documented examples (from his history) of

disturbances in thinking have never been demonstrated to be the result of faulty brain chemistry or neurocircuitry.

9. While there is no uniform agreement within Psychiatry on these questions, it seems to me that physicians have a responsibility to use caution when one approach (the biologic) has been tried and is failing. A more psychosocial approach is in my opinion long overdue.
10. Charles Helmer has been ordered to receive involuntary ECT, which is a procedure that directs electrical energy to those portions of the brain central to memory and learning, i.e., the amygdala and hippocampus, lying beneath the temporal lobes of the cortex. As such the inevitable results of ECT are interference with retention and learning.
11. The effects of ECT are cumulative and there is clear evidence that any short-term lessening of depressive symptoms is temporary, amounting to a simple masking of emotion, followed in coming months to a return of the previous depression. The track record of ECT is that all too often one session of ECT is followed by another in perpetuity.
12. Due to the repeated sessions of ECT, the risk of Charles Helmer becoming a long-term brain-injured person is grave
13. In addition, the fact that Charles Helmer's ECT has been administered against his will is something that in my opinion is hindering whatever other treatment programs might try to accomplish. I do not believe that it is possible for treating physicians to establish a meaningful therapeutic relationship with Charles Helmer if their efforts, however well-intended, relies on force.
14. I want to outline what I consider an approach much more likely to benefit Charles Helmer. It would begin with a reconsideration by the Court of the question of Charles

Helmer's guardianship. I offer no opinion as to whether his mother, Ann Fuller, should be re-appointed, only that an effort be made to find a person open to the above recommendations and agreeable to Charles Helmer.

15. I also recommend a psycho-social approach to his treatment that consists of no ECT whatsoever and a gradual reduction of his current medications and eventual replacement by a Benzodiazepine in moderate dosage, and voluntary placement in a living situation that does not insist on ECT and heavy medication as a condition for residency.
16. Benzodiazepines have the best risk/benefit ratio, i.e., the best chance of minimizing the addictive potential and minimizing the brain disabling effects outlined above.

FURTHER YOUR AFFIANT SAYETH NOT

Date: May 13, 2021

lee coleman (May 13, 2021 06:54 PDT)

Dr. Lee Coleman

STATE OF NORTH CAROLINA)
) ss.
COUNTY)

Appendix A

Evidence for the Neurotoxicity of Antipsychotic Drugs

The History of Neuroleptics

The modern history of psychiatric drugs dates back to the early 1950s, when derivatives of the synthetic dye and rocket fuel industries were found to have medicinal properties. Following World War II, a wide variety of compounds came to be tested in humans. The antihistamine known as chlorpromazine (Thorazine) is generally regarded as the first "anti-psychotic" drug, responsible for igniting the psychopharmacology revolution. As Thorazine grew in popularity, medications replaced neurosurgery and shock therapies as the favored treatments for the institutionalized mentally ill. (For three excellent reviews on this subject, see Cohen, Healy, and Valenstein).[1-3]

When, in 1955, Drs. Jean Delay and Pierre Deniker coined the term "neuroleptic" to describe Thorazine, they identified five defining properties of this prototype: the gradual reduction of psychotic symptoms, the induction of psychic indifference, sedation, movement abnormalities (parkinsonism), and predominant subcortical effects.[4] At its inception, Thorazine was celebrated as a *chemical lobotomizer* due to behavioral effects which paralleled those associated with the removal of brain tissue.[5] As the concept of lobotomy fell into disfavor, the alleged antipsychotic features of the neuroleptics came to be emphasized. Ultimately, the two terms became synonymous.

Ignorant of the historical definition of neuroleptics as ***chemical lobotomizers***, members of the psychiatric profession have only rarely acknowledged the fact that these dopamine blocking compounds have been, and continue to be, a major cause of brain injury and dementia. Nevertheless, the emergence of improved technologies and epidemiological investigations have made it possible to demonstrate why these medications should be characterized as neurotoxins, rather than neurotherapies.

Evidence for Neuroleptic (Antipsychotic) Induced Brain Injury

Proof of neuroleptic toxicity can be drawn from five major lines of evidence:

1) postmortem studies of human brain tissue
2) neuroimaging studies of living humans
3) postmortem studies of lab animal brain tissue
4) biological markers of cell damage in living humans
5) lab studies of cell cultures/chemical systems following drug exposure

Line of Evidence #1: Postmortem Studies in Humans

In 1977, Jellinger published his findings of neuropathological changes in the brain tissue of twenty-eight patients who had been exposed to neuroleptics for an average of four to five years.[6] In most cases, the periods of drug treatment had been intermittent. At autopsy, 46% of the subjects were found to have significant tissue damage in the movement centers (basal ganglia) of the brain, including swelling of the large neurons in the caudate nucleus, proliferation of astrocytes and other glial cells, and occasional degeneration of neurons. Three patients exposed to chronic neuroleptic therapy also demonstrated inflammation of the cerebral veins (phlebitis). An example of the abnormalities is shown below:

This photo demonstrates reactive gliosis (black dots represent scar tissue) in the caudate of a patient who had received neuroleptic therapy. Patients in this study had received the following drug treatments: chlorpromazine (Thorazine), reserpine, haloperidol (Haldol), trifluoperazine (Stelazine), chlorprothixen (Taractan), thioridazine (Mellaril), tricyclic antidepressants, and/or minor tranquilizers.

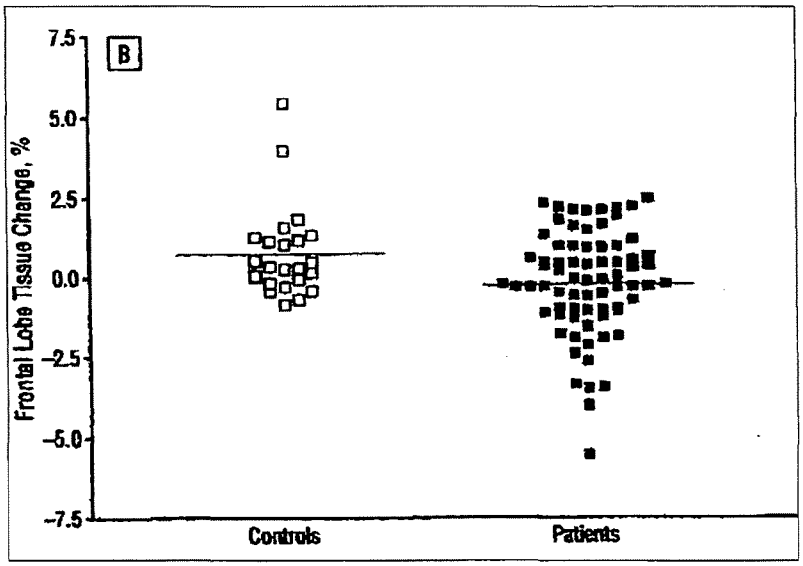
The Jellinger study is historically important because it included two comparison or control groups, allowing for the determination of treatment-related vs. illness-related changes. Damage to the basal ganglia was seen in only 4% of an age-matched group of psychotic patients who had *avoided* long-term therapy with neuroleptics; and in only 2% of a group of patients with routine neurological disease. Based upon the anatomic evidence, Jellinger referred to the abnormal findings as ***human neuroleptic encephalopathy*** (meaning: a drug-induced, degenerative brain process).

Line of Evidence #2: Neuroimaging Studies of Living Human Subjects

Several groups of researchers have documented a progressive reduction of frontal lobe tissue in patients treated with neuroleptics. Madsen et al. performed serial C.T. scans on thirty-one previously unmedicated psychotic patients and nine healthy controls. Imaging was performed at baseline and again after five years.[7-8] During this time, the patients received neuroleptic therapy in the form of traditional antipsychotics (such as Thorazine) and/or clozapine. Findings were remarkable for a significant progression of frontal lobe atrophy in all of the patients, relative to the controls. ***The researchers detected a dose-dependent link to brain shrinkage, estimating the risk of frontal degeneration to be 6% for every 10 grams of cumulative Thorazine (or equivalent) exposure.***

Similar findings have been documented with newer technologies, such as magnetic resonance imaging (MRI). In 1998, Gur et al. published the results of a study which followed forty psychotic patients prospectively for 2 ½ years.[9] At entry, half of these individuals had received previous treatment with neuroleptics, and half were neuroleptic naïve. All patients subsequently received treatment with antipsychotic medications. ***At the end of thirty months, the patients displayed a significant loss of brain volume (4 to 9%) in the frontal and temporal lobes.*** For both patient groups, this volume loss was associated with unimpressive changes in target symptoms (e.g., the inability to experience pleasure, restricted affect, and limited speech) and ***with significant deteriorations in cognitive functioning*** (such as attention, verbal memory, and abstract thought).

Researchers at the University of Iowa began a longitudinal investigation of psychotic patients between 1991 and 2001.[10] Enrolling 23 healthy controls, and 73 patients recently diagnosed with schizophrenia, the study design called for a series of MRI exams to be conducted at various intervals (planned for 2, 5, 9, and 12 years). In 2003, the research team published the results from the first interval. Head scans and neuropsychological testing were repeated on all patients after a period of three years of neuroleptic treatment. Several findings were remarkable. ***First, patients demonstrated statistically significant reductions in frontal lobe volume (0.2% decrease per year) compared to the healthy controls***:



These changes were associated with more severe negative symptoms of schizophrenia (alogia, anhedonia, avolition, affective flattening), and with impairments in executive functioning (e.g., planning, organizing, switching). ***Second, almost 40% of the patients failed to experience a remission,*** defined by the investigators as eight consecutive weeks with nothing more than mild positive symptoms (delusions, hallucinations, bizarre behavior, inappropriate affect, formal thought disorder). In other words, *almost half of the patients remained floridly psychotic.* ***Third, these poor outcomes occurred despite the fact that the patients had been maintained on neuroleptics*** for 84% of the inter-MRI duration, and ***despite the fact that the newest therapies had been favored***: atypical antipsychotics had been given for 62% of the treatment period. Reflecting upon these disappointing results, the research team conceded:

> "...the medications currently used cannot modify an injurious process occurring in the brain, which is the underlying basis of symptoms...We found that progressive volumetric brain changes were occurring despite ongoing antipsychotic drug treatment." [11]

In 2005, Lieberman et al. published the results of their international study involving serial MRI scans of 58 healthy controls and 161 patients experiencing a first episode of psychosis.[12] Most patients (67-77%) had received prior treatment with antipsychotics for a cumulative duration of at least four months. Throughout the two-year period of follow-up, patients were randomized to double-blind treatment with olanzapine (5 to 20 mg per day) or haloperidol (2 to 20 mg per day). The study protocol permitted the use of concomitant medications, such as minor tranquilizers (up to 21 days of cumulative therapy). Mood stabilizers and antidepressants other than Prozac (which could be used at any time) were allowed only after the first three months of the study. The primary outcome analysis involved a comparison of MRI changes from baseline, focusing upon seven regions of interest: whole brain, whole brain gray matter, whole brain white matter, lateral ventricles, 3rd ventricle, and caudate. ***Haloperidol recipients experienced persistent gray matter reductions throughout the brain***. These abnormalities emerged as early as twelve weeks. ***For olanzapine recipients, significant brain atrophy (loss of gray matter) was detected in the frontal, parietal, and occipital lobes following one year of drug exposure***:

Average change in tissue volume (cubic centimeter) by week 52

	olanzapine	haloperidol	controls
frontal gray	- 3.16	- 7.56	+ 0.54
parietal gray	- 0.86	- 1.71	+ 0.70
occipital gray	- 1.49	- 1.50	+ 0.99
whole brain gray	- 3.70	- 11.69	+ 4.12

In addition to these changes, both groups of patients experienced enlargements in whole brain fluid and lateral ventricle volumes. These disturbances in brain morphology (structure) were associated with retarded improvement in symptoms and neurocognitive functioning.

Line of Evidence #3: Postmortem Animal Studies

Acknowledging the longstanding problem in medicine of distinguishing the effects of treatment from underlying disease processes, scientists at the University of Pittsburgh have advocated the use of animal research involving monkeys (non-human primates). In one such study, the researchers attempted to identify the effects of lab procedures upon brain samples prepared for biochemical and microscopic analyses.[13] Eighteen adult male macaques (aged 4.5 to 5.3 years) were divided into three groups and were trained to self-administer drug treatments. *Monkeys received oral doses of haloperidol, placebo (sham pellets), or olanzapine for a period of 17 to 27 months.* During this time, blood samples were taken periodically and drug doses were adjusted in order to achieve plasma levels identical to those which occur in clinical practice (1 to 1.5 ng/mL for haloperidol; 10-25 ng/mL for olanzapine). At the end of the treatment period, the animals were euthanized. Brains were removed, and brain size was quantified using two different experimental procedures.

A variety of behavioral and anatomical effects were noted. ***First, all animals appeared to develop an aversion to the taste and/or subjective effects of the medications***. This required creative changes in the methods which were used to administer the drug treatments. ***Second, a significant number of monkeys became aggressive during the period of study*** (four of the six monkeys exposed to olanzapine; two of the six monkeys exposed to haloperidol). One monkey, originally placed in the sham treatment group, engaged in self-mutilatory behaviors. A switch to olanzapine resulted in no improvement. However, when the animal was provided with increasing human contact, a doubling of cage space, a decrease in environmental stimuli, and enhanced enrichment, his behavior stabilized. ***Third, the chronic exposure to neuroleptics resulted in significant reductions in total brain weight compared to controls (8% lower weight for haloperidol, 10% lower weight for olanzapine)***. Regional changes in weight and volume were also significant, with the largest changes identified in the frontal and parietal lobes:

	volume reduction in brain weight (relative to sham controls)	
	olanzapine	haloperidol
frontal lobe	10.4%	10.1%
parietal lobe	13.6%	11.2%

Based upon these results, the researchers concluded that the progressive reductions in brain volume which have been reported in many studies on schizophrenia may reflect the effects of drug treatment. They proposed that further studies be undertaken to characterize the mechanisms responsible for these changes and to identify the precise targets (neurons, glia) of these effects.

Line of Evidence #4: Biological Markers of Cell Damage

Researchers in Austria have been interested in identifying a biological marker which can be used to diagnose Alzheimer's dementia or other forms of degenerative disease prior to death. In 2005, Bonelli et al. published the results of an investigation which involved the retrospective analysis of the cerebrospinal fluid (CSF) from 84 patients who had been hospitalized for the treatment of neurological conditions.[14] Hospital diagnoses included two forms of dementia (33 cases of Alzheimer's dementia, 18 cases of vascular dementia), low back pain (9 patients), headache (5 patients), and neuropathy (4 patients). Researchers evaluated the fluid samples for tTG (tissue transglutaminase), an enzyme which is activated during the process of apoptosis or programmed cell death. Medical histories were also reviewed in order to identify pharmaceuticals consumed within 24 hours of the fluid collection via lumbar puncture.

Findings were remarkable for significant relationships between treatment with neuroleptics and elevations in tTG, particularly for females and patients with Alzheimer's dementia. When specific medications were reviewed, five antipsychotics (***including three of the so-called atypicals: melperone, olanzapine and zotepine***) were associated with above average levels of tTG:

tTG levels for patients receiving antipsychotic medications	
melperone	14.95 ng/dL
zotepine	8.78 ng/dL
olanzapine	8.50 ng/dL
flupentixol	7.86 ng/dL
haloperidol	7.30 ng/dL
average tTG for entire patient group:	4.78 ng/dL

Based upon these results, the research team drew the following conclusions:

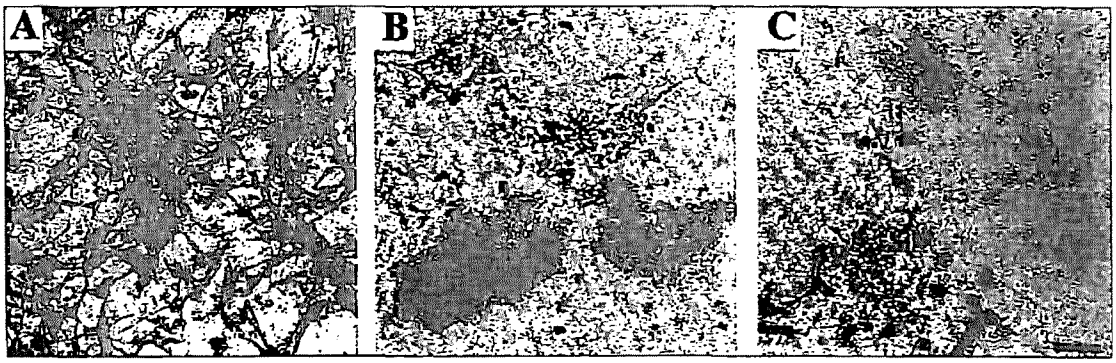
> "...our study failed to show a difference in neurotoxicity between atypical and typical neuroleptics, and we should be careful when using neuroleptics as first-line drugs in Alzheimer's dementia patients...Because the level of cerebral apoptosis of non-demented patients on antipsychotics appears to be indistinguishable to [sic] Alzheimer's dementia patients without this medication, the question might arise as to whether neuroleptics actually induce some degenerative process...In conclusion, we suggest that typical and atypical neuroleptics should be strictly limited in all elderly patients, especially in females and all patients with Alzheimer's dementia." [15]

While there were limitations to the Austrian study, it remains the only existing investigation of cell death in living subjects – none of whom received neuroleptics for mental illness. Furthermore, although the study failed to address possible relationships between apoptosis and antipsychotic exposure in terms of *dose* and *duration of treatment*, the implications extend far beyond the geriatric population. In fact, the finding that neuroleptic medications (and other psychiatric drugs) induce the process of apoptosis has inspired the oncology community to research these chemicals as adjuvant treatments for cancer. In other words, many psychiatric drugs are lethal to rapidly proliferating cells. To the extent that these chemotherapies are lethal to normal as well as cancerous tissues, there exists an urgent need for medical professionals and regulatory authorities to properly characterize the full effects of these toxins.

Line of Evidence #5: Lab Studies of Isolated Cells or Tissues

In vitro studies refer to research conducted upon tissue samples or isolated chemical systems obtained from lab animals or humans. In one such project, researchers in Germany exposed cell cultures to varying concentrations of haloperidol (Haldol).[16] The experiment involved the removal of hippocampal neurons from embryonic rats. Some of these neurons were then incubated with the neuroleptic and or its active metabolite (reduced haloperidol), while a control group of neurons remained drug free. Following a twenty-four hour period of incubation, neurons exhibited a dose-related reduction in viability, relative to the control:

drug concentration	Haldol	Reduced Haldol (drug metabolite)
1 uM	27% cell death	13% cell death
10 uM	35% cell death	29% cell death
100 uM	96% cell death	95% cell death



Examples of neuronal cell loss (death) following incubation with Haldol

A: normal neurons (dark) from unmedicated hippocampal brain tissue
B: 100 uM of Haldol: severe loss of cell bodies and neuron extensions.
Note: Dark patches at bottom of slide represent abnormal cells which have rounded up and detached from the culture dish.
C: 10 uM of Haldol: moderate loss of neurons and neuronal extensions.

Although this particular investigation involved a non-human species (rats), its results were medically concerning. First, the study employed Haldol concentrations which are clinically relevant to humans. In common medical practice, psychiatric patients are exposed to doses of Haldol which produce blood levels of 4 to 26 ng/mL. Brain levels are five to forty times higher. This means that psychiatric patients are indeed exposed to Haldol concentrations (1.4 to 2.8 uM) identical to the low levels that were tested in the German study. Second, the potential toxicity of Haldol in humans may be far greater than that revealed here, based upon the fact that this experiment was time limited (24 hour incubation only). Third, the neurons sampled in this experiment were taken from the key brain structure (hippocampus) associated with learning and memory. The possibility that Haldol kills neurons in this area (even if limited to 30%) provides a mechanism of action which accounts for the cognitive deterioration that is frequently observed in patients who receive this neuroleptic.

Dementia

Several teams of investigators have documented the problems associated with the use of neuroleptics in patients with pre-existing dementia. In a study which enrolled 179 individuals diagnosed with probable Alzheimer's disease, subjects were followed prospectively for an average of four years (range: 0.2 to 14 years).[17] Symptoms were evaluated on an annual basis, and changes in medication were carefully observed. Over the course of the investigation, 41% of the subjected progressed to severe dementia, and 56% of the patients died. Using a statistical procedure called proportional hazards modeling, the ***researchers documented a statistically significant relationship between exposure to neuroleptics and a two-fold higher likelihood of severe neurobehavioral decline.***

In England, a longitudinal investigation followed 71 demented patients (mean age: 72.6 years) over the course of two years.[18] Interviews were conducted at four-month intervals, and autopsy analyses of brain tissue were performed on 42 patients who expired. Main outcomes in this study were changes in cognitive functioning, behavioral difficulties, and (where applicable) postmortem neuropathology. ***The research team discovered that the initiation of neuroleptic therapy was associated with a doubling of the speed of cognitive decline.*** This relationship was independent of the degree of dementia or the severity of behavioral symptoms for which the medications may have been prescribed.

While the methodology could not definitively prove that the drugs were the cause of mental deterioration, the study clearly demonstrated their inability to prevent it. The researchers concluded that:

> "an appropriate response at present would be to undertake regular review of the need for patients to continue taking neuroleptic drugs, pursuing trials without medication where possible. This study highlights the importance of understanding the neurological basis of behavioural changes in dementia so that less toxic drugs can be developed for their treatment." [19]

In 2005, an United Kingdom team of investigators performed autopsies on forty patients who had suffered from dementia (mean duration: four years) and Parkinsonian symptoms (mean duration: three years) prior to death.[20] Based upon a postmortem tissue analysis of the brain, exposure to neuroleptics (***old and new***) was associated with a four-fold increase in neurofibrillary tangles, and a 30% increase in amyloid plaques in the cortex of the frontal lobes. Due to the fact that the prevalence of symptoms did not vary between patients who received neuroleptics and those who remained neuroleptic free, the abnormalities detected appeared to be a result of the pharmaceutical agents, rather than a pre-existing disease. Most importantly, the findings suggest that all of the antipsychotics (***old and new***) are capable of inducing or accelerating the pathological changes (plaques and tangles) which are the defining features of Alzheimer's disease.

To review:

Evidence from postmortem human analyses reveals that older neuroleptics create scarring and neuronal loss in the movement centers of the brain. These changes are an example of *subcortical* dementia, such as Parkinson's or Huntington's disease.

Evidence from neuroimaging studies reveals that ***old and new*** neuroleptics contribute to the progressive shrinkage and/or loss of brain tissue. Atrophy is especially prominent in the frontal lobes which control decision making, intention, and judgment. These changes are consistent with *cortical* dementia, such as Niemann-Pick's or Alzheimer's disease.

Evidence from postmortem analyses in lab animals reveals that ***old and new*** neuroleptics induce a significant reduction in total brain weight and volume, with prominent changes in the frontal and parietal lobes.

Evidence from biological measurements suggests that ***old and new*** neuroleptics increase the concentrations of tTG (a marker of programmed cell death) in the central nervous system of living humans.

Evidence from *in vitro* studies reveals that haloperidol reduces the viability of hippocampal neurons when cells are exposed to clinically relevant concentrations. (Other experiments have documented similar findings with the second-generation antipsychotics.)

Shortly after their introduction, neuroleptic drugs were identified as chemical lobotomizers. Although this terminology was originally metaphorical, subsequent technologies have demonstrated the scientific reality behind this designation. Neuroleptics are associated with the destruction of brain tissue in humans, in animals, and in tissue cultures. Not surprisingly, this damage has been found to contribute to the induction or worsening of psychiatric symptoms, and to the acceleration of cognitive and neurobehavioral decline.

Appendix B

Successful Alternatives to Antipsychotic Drug Therapy [21-22]

In a paper entitled "The Tragedy of Schizophrenia," psychologist and psychotherapist, Dr. Bert Karon, challenges the prevailing notion that psychosis remains a largely incurable brain disease which is best modified by pharmacotherapy. Mindful of the fact that "there has never been a lack of treatments which do more harm than good," Karon explicitly contends that humane psychotherapy remains the treatment of choice for schizophrenia, and he understands why this has always been so.

Karon reminds his readers that history provides important lessons for contemporary practitioners. The Moral Treatment Movement in the late 18th century emphasized four essential elements in the care of the mentally ill:

- respect for the patient (no humiliation or cruelty)
- the encouragement of work and social relations
- the collection of accurate life histories
- the attempt to understand each person as an individual

When these imperatives were applied in the asylums of America and Europe, the rates of discharge reached 60-80%. This was far better than the 30% recovery rate which occurred about a century later, in the era of pharmacotherapy.

Although the Moral Treatment Movement was replaced by the tenets of biological psychiatry in the late 1800s, its elements were incorporated in the theory and practice of various psychosocial therapies. For reasons which were largely political and economic, however, the consensus in American psychiatry came to denigrate the use of these Moral Treatment offshoots – particularly, in the treatment of psychosis.

Academic opinion leaders in the field of psychiatry now contend that there is insufficient evidence to support the use of psychotherapy as a major or independent intervention for psychosis. This perspective is contradicted by a rich (but suppressed) history in the published literature, and by the success of many ongoing programs, some of which are summarized below.

The Bockoven Study

This study compared the prognoses of 100 patients who were treated at Boston Psychopathic Hospital between 1947 and 1952; and 100 patients who were treated at the Solomon Mental Health Center between 1967 and 1972. Patients were similar in the severity of their symptoms, but the earlier cohort received treatment that was limited to psychosocial therapies. In contrast, the 1967 cohort received medication, including neuroleptics. Five-year outcomes were superior for the earlier cohort: 76% return to community and a 44% relapse in terms of re-hospitalization. In comparison, the 1967 cohort experienced an 87% return to the community, but a 66% rate of rehospitalization. The investigators concluded that medications were associated with higher numbers of relapsing patients, and a higher number of relapses per patient.

The Vermont Longitudinal Study of Persons With Severe Mental Illness

In 1955, a multidisciplinary team of mental health care professionals developed a program of comprehensive rehabilitation and community placement for 269 severely disabled, back wards patients at the Vermont State Hospital. When none of these patients improve sufficiently through two or more years of neuroleptic therapy, they were offered a revised plan of treatment. The intensive rehabilitation program was offered between 1955 and 1960. Subsequently, patients were released to the community as they became eligible for discharge, receiving a variety of services that emphasized continuity of care. At a long-term follow-up performed between 1980 and 1982, 68% of patients exhibited no signs of schizophrenia, and 45% displayed no psychiatric symptoms at all. Most patients had stopped using medication (16% not receiving, 34% not using, and 25% using only sporadically). A subsequent analysis revealed that all of the patients with full recoveries had stopped pharmacotherapy completely. (In other words, compliance with antipsychotic drug treatment was neither necessary, nor sufficient, for recovery.)

The Michigan State Psychotherapy Project

Between 1966 and 1981, Drs. Bert Karon and Gary VandenBos supervised the Michigan State Psychotherapy Project in Lansing, Michigan. Patients were randomly assigned to receive about 70 sessions of psychoanalytically informed psychotherapy, medication, or both over a period of 20 months. By the end of treatment, the psychotherapy group had experienced earlier hospital discharge, fewer readmissions (30-50% fewer days of hospitalization), and superior improvement in the quality of symptoms and overall functioning. The poorest outcomes occurred among the chronically medicated, even when drugs were combined with psychotherapy.

The Colorado Experiment

In 1970, Drs. Arthur Deikman and Leighton Whitaker presided over an innovative treatment ward at the University of Colorado. Occurring just 20 years after the advent of the neuroleptics, the Colorado experiment attached a priority to psychosocial interventions during the inpatient care of 51 patients diagnosed with severe mental illness. Individual and group psychotherapies were delivered in the spirit of the Moral Treatment Movement, motivated by a spirit of collaboration, respect, and a desire to understand behaviors as expressive of meaning. Furthermore, psychotherapies were used with the goal of restoring pre-psychotic abilities and independent functioning, rather than with the more limited goal of blunting symptoms in order to justify rapid discharge. *Medications were used as interventions of last resort.* After ten months of experimentation, the researchers made the following discovery: compared to "treatment as usual" (neuroleptics and supportive therapy), the recipients of intensive psychotherapy experienced lower recidivism (fewer readmissions after discharge) and lower mortality.

The Soteria Project

Between 1973 and 1981, Dr. Loren Mosher (then Director of Schizophrenia Research at the National Institute of Mental Health) presided over an investigational program in Northern California. Over the course of nine years, the Soteria project involved the treatment of 179 young psychotic subjects, newly diagnosed with schizophrenia or schizophrenia-like conditions. A control group consisted of consecutive patients arriving at a conventional medical facility, who were assigned to receive care at a nearby psychiatric hospital. Soteria was distinguished by an attitude of hopefulness; a treatment philosophy which de-emphasized biology and medicalization; a care setting marked by involvement and spontaneity; and a therapeutic component which placed a priority upon human relationship. Most significantly, Soteria involved the minimal use of neuroleptics or other drug therapies. Two-year outcomes demonstrated superior efficacy for the Soteria approach. Although 76% of the Soteria patients remained free of antipsychotics in the early stages of treatment; and although 42% remained free of antipsychotics throughout the entire two-year period, the Soteria cohort outperformed the hospital control group (94% of whom received continuous neuroleptic therapy) by achieving superior outcomes in terms of residual symptoms, the need for rehospitalization, and the ability to return to work.

The Agnews State Hospital Experiment

In 1978, Rappoport et al. summarized the clinical outcomes of 80 young males (aged 16-40) who had been hospitalized in San Jose at Agnews State Hospital for the treatment of early schizophrenia. Following acceptance into a double-blind, randomized controlled study, subjects were assigned to receive placebo or neuroleptic therapy (chlorpromazine). Treatment effectiveness was evaluated using various rating scales for as long as 36 months after hospital discharge. The best outcomes, in terms of severity of illness, were found among the patients who avoided neuroleptic therapy both during and after hospitalization. Patients who received placebo during hospitalization, with little or no antipsychotic exposure afterward, experienced the greatest symptomatic improvement; the lowest number of hospital readmissions (8% vs. 16-53% for the other treatment groups); and the fewest overall functional disturbances.

Finland – Acute Psychosis Integrated Treatment (Needs Adapted Approach)

In 1992, clinicians in Finland launched a multi-center research project using Acute Psychosis Integrated (API) Treatment. Keenly aware of the problems associated with antipsychotic drug therapy, the research team adopted a model of care which emphasized four features: family collaboration, teamwork, a basic therapeutic attitude, and adaptation to the specific needs of each patient. The initial phase of the project enrolled 135 subjects (aged 25-34) experiencing a first episode of psychosis. All were neuroleptic naïve, and all had limited or no previous exposure to psychotherapy. Three of the six participating treatment facilities agreed to use antipsychotic medications sparingly. The experimental protocol assigned patients to two groups with 84 receiving the Needs Adapted Approach, and 51 receiving treatment as usual. Two-year outcomes favored the experimental treatment group: fewer days of hospitalization, more patients without psychosis, and more patients with higher functioning. These outcomes occurred despite the fact that the Needs Adapted group consisted of more patients with severe illness (diagnosed schizophrenia) and longer durations of untreated psychosis, and despite the fact that 43% of the Needs Adapted subjects avoided antipsychotics altogether (vs. 6% of the controls).

Subsequent refinements to the Needs Adapted Approach have expanded upon these initial successes.[23-25] In a series of papers describing outcomes for what has evolved to be known as the Open Dialogue Approach, the Finnish clinicians have achieved the following five-year outcomes for first-episode, non-affective psychosis:

82% rate of full remission of psychotic symptoms
86% rate of return to studies of full-time employment
14% rate of disability (based upon need for disability allowance)

The results of the Finnish experiment stand in stark contrast to the results of the prevailing American standard of care, which currently features a 33% rate of lasting symptom reduction or remission; and, at most, a 40% rate of social or vocational recovery.[26]

Pre-Therapy: A Client-Centered Approach [27]

It has been suggested by many professionals that it is not possible to conduct meaningful psychotherapy with any individual who is deep in the throes of a psychotic process. Pre-Therapy refers to a client-centered form of psychotherapy which reaches through psychosis and/or other difficulties (such as cognitive limitations, autism, and dementia) in order to make contact with the pre-verbal or pre-expressive Self. Drawing upon the principles of the late Carl Rogers and developed by American psychologist, Dr. Garry Prouty, Pre-Therapy emphasizes the following treatment philosophy and techniques:

unconditional positive regard for the client:
"the warm acceptance of each aspect of the client's world"

empathy: "sensing the client's private world as if it were your own"

congruence: "within the relationship, the therapist is freely and deeply himself or herself"

non-directiveness: "a surrendering of the therapist to the client's own intent, directionality, and process"

psychological contact: exemplified by the therapist's use of contact reflections, an understanding of the client's psychological or contact functions, and the interpretation of the client's contact behaviors

Although Pre-Therapy has not been promoted or publicized within the United States, it has been used successfully around the world to assist regressed or language-impaired individuals in regaining or improving their capacity for verbal expression. (It has even been used to resolve catatonia successfully, without the use of drug therapy.) [28]

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DATED this 16th day of May, 2008, in WILMINGTON, North Carolina.

Grace E Jackson MD

Grace E. Jackson, MD

SUBSCRIBED AND SWORN TO before me this 16th day of May, 2008.

Notary Public in and for North Carolina

State of Alaska)
)ss
Third Judicial District)

I, James B. Gottstein, hereby swears that this reproduction of the written testimony of Grace E. Jackson, MD, to which this is appended, is a true, correct and complete photocopy of the original filed in 3AN 08-493PR, Superior Court for the State of Alaska, Third Judicial District at Anchorage.

Dated: 8/5/2019

James B. Gottstein

SUBSCRIBED AND SWORN TO before me this 5 day of August, 2019.

Notary Public
Aliya Carver
State of Alaska
Commission expires 10/13/202
Commission # 3008

Aliya Carver
Notary Public in and for Alaska
My Commission expires: 10-13-2020

AFFIDAVIT OF PETER C. GØTZSCHE, MD

THIRD JUDICIAL DISTRICT)
)ss
STATE OF ALASKA)

PETER C. GØTZSCHE, MD, being first sworn under oath hereby deposes and states as follows:

A. Background and Credentials

1. In 1973 I was awarded a Master of Science degree in biology and chemistry from the University of Lund in Sweden. In 1974 I was awarded a Master of Science Degree from the University of Copenhagen in zoology and chemistry. In 1984 I received my Medical Doctor degree from the University of Copenhagen.

2. From April 1, 1975 through March 31, 1977 I was a drug representative and product manager for the Astra Group A/S.

3. I founded the medical department at Astra-Syntex A/S in 1977 and headed it from April 1, 1977, through August 31, 1983.

4. Astra Group A/S and Astra-Syntex A/S are both predecessors of the current drug company AstraZeneca.

5. In 1993 I co-founded the Cochrane Collaboration, now known simply as Cochrane, with Iain Chalmers and others.

6. That same year, I founded the Nordic Cochrane Centre and have headed it ever since, being its Director and Chief Physician.

7. Cochrane is free from financial conflicts of interest and is internationally recognized for its objective analysis of medicines, medical devices and other interventions in healthcare.

8. A large part of my career has involved statistics and research methodology. I am a member of several groups publishing guidelines for good reporting of research and have co-authored CONSORT for randomised trials (www.consort-statement.org), STROBE for observational studies (www.strobe-statement.org), PRISMA for systematic reviews and meta-analyses (www.prisma-statement.org), and SPIRIT for trial protocols (www.spirit-statement.org).

9. I have published more than 70 papers in "the big five" (British Medical Journal, Lancet, Journal of the American Medical Association, Annals of Internal Medicine, and the New England Journal of Medicine) which have been cited over 15,000 times.

10. My book, Rational Diagnosis and Treatment: Evidence-Based Clinical Decision-Making, was published in 2007.

11. My book Mammography Screening: Truth, Lies and Controversy, was published in 2012. This latter book followed up on a previous paper I had written, Is screening for breast cancer with mammography justifiable?,[1] and later papers I authored or co-authored about the benefits and harms not supporting the recommendations for mammography screening.

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[1] Lancet 2000;355:129-34.

12. In 2013 I published the book, Deadly Medicines and Organised Crime: How Big Pharma has Corrupted Healthcare (Deadly Medicines), detailing how the drug industry systematically overstates the benefits of medications and understates their harms. Two chapters of Deadly Medicines focused on psychiatry and psychiatric drugs, which are the worst in terms of overstating their benefits and understating their harms.

13. In 2015 I published an entire book on psychiatric drugs, Deadly Psychiatry and Organised Denial (Deadly Psychiatry), detailing the lack of solid evidence for clinically meaningful benefits of psychiatric treatments, the immense harm they cause including many unreported suicides and other deaths, and the problems with psychiatric coercion.

14. I am considered an expert on medical research methodology and on evaluating the trustworthiness of research results.

15. I have testified, orally, or in writing, or both, as an expert witness in the following court cases:

a. 2014: Danish High Court, double homicide attempt on methylphenidate (Ritalin).
b. 2014: Norwegian High Court, forced treatment with olanzapine (Zyprexa).
c. 2015: Norwegian High Court, Patient Damage Council, oseltamivir (Tamiflu) for influenza.
d. 2016: Dutch High Court, double homicide case on paroxetine (Paxil).

B. Involuntary Commitment and Forcing Psychiatric Drugs on Patients is Not in Their Best Interests

16. Psychiatric hospitalization is associated with dramatically worse outcomes for patients with the risk of suicide increased 44 times for people admitted to a psychiatric hospital compared to no psychiatric treatment in the preceding year.[2]

17. When a patient reacts violently, it is often a result of the violence perpetrated against the person through involuntary psychiatric interventions.

18. Psychiatrists almost always believe that violence is caused by insufficient drug treatment although it is usually caused by the drugs the patients receive.

19. The first generation of drugs developed to treat people diagnosed with schizophrenia such as chlorpromazine (Thorazine), haloperidol (Haldol), trifluoperazine (Stelazine), thioridazine (Mellaril), and fluphenazine (Prolixin) were at first considered chemical lobotomies. They were designated "neuroleptics,' meaning "seize the brain." They were also called "major tranquilizers" to distinguish them from the benzodiazepines such as Valium (Valium), known as "minor tranquilizers," which is misleading, as major or minor tranquilization can be obtained with either type of drug; it is simply a matter of dose.

20. The neuroleptics are now commonly called "antipsychotics" due to drug company marketing even though they cannot cure psychosis and though their effects are highly unspecific, namely to sedate people. These drugs are not specific to people

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[2] Hjorthøj CR, et al. *Social Psychiatry and Psychiatric Epidemiology*, 2014;49:1357–65; Gøtzsche PC. Deadly psychiatry and organised denial. *Copenhagen: People's Press*; 2015.

experiencing psychosis; instead they suppress mental functioning so much, that people become less troubled and troubling, often for just a short time until their brains adjust to the drug.

21. Because these drugs block 70-90% of the dopamine transmission to certain receptors in the brain, the brain compensates by growing more dopamine receptors, causing psychotic symptoms if people abruptly withdraw from the drugs. These withdrawal, or "discontinuation" symptoms are almost always misinterpreted as symptoms of mental illness.[3]

22. These drugs cause serious physical harm, including the often fatal Neuroleptic Malignant Syndrome and akathisia, which increases the risk of both suicide and homicide.[4]

23. The second generation of neuroleptics, such as risperidone (Risperdal), olanzapine (Zyprexa), quetiapine (Seroquel), aripiprazole (Abilify) and ziprasidone (Geodon) started to be introduced in the mid-1990's. These neuroleptics were named "atypical antipsychotics" by drug companies based on their false assertions that they are more effective and less harmful than the first generation of neuroleptics.

24. The drug company financed studies used to obtain regulatory approval of both first and second generation neuroleptics are highly flawed, e.g. because of (a) lack

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[3] Breggin P. Medication madness. New York: St. Martin's Griffin; 2008.

[4] Gøtzsche PC. Deadly psychiatry and organised denial. Copenhagen: People's Press; 2015; Breggin P. Medication madness. New York: St. Martin's Griffin; 2008.

of adequate blinding, (b) clinically irrelevant outcomes, and (c) using people abruptly withdrawn from other neuroleptics and often experiencing withdrawal psychotic symptoms when they receive placebo in the control group.[5]

25. 80% of people diagnosed with a first psychotic break and given psychological help to get through it without or with minimal neuroleptics (selective use) recover and can go on to lead productive lives.[6]

Outcomes with Selective Use Of Antipsychotics

Five-Year Outcomes for First-Episode Psychotic Patients in Finnish Western Lapland Treated with Open-Dialogue Therapy

Patients (N=75)	
Schizophrenia (N=30)	
Other psychotic disorders (N=45)	
Antipsychotic use	
Never exposed to antipsychotics	67%
Occasional use during five years	33%
Ongoing use at end of five years	20%
Psychotic symptoms	
Never relapsed during five years	67%
Asymptomatic at five-year followup	79%
Functional outcomes at five years	
Working or in school	73%
Unemployed	7%
On disability	20%

[5] Gøtzsche PC. Deadly psychiatry and organised denial. Copenhagen: People's Press; 2015;

[6] Seikkula, J., "Five-year experience of first-episode nonaffective psychosis in open-dialogue approach," *Psychotherapy Research* 16 (2006): 214-218.

26. In comparison, only 5% of people who are maintained on neuroleptics recover and 40% of people who have been put on neuroleptics and then stop taking them.[7]

27. The only trial that exists where remitted first episode patients were randomized to dose reduction or discontinuation, or to maintenance therapy with antipsychotics, showed that more patients had recovered in the dose reduction/discontinuation group than in the maintenance group after seven years (40% versus 18%).[8]

28. Neuroleptics kill people. For every 100 patients with Alzheimer's disease or dementia there was one additional death, when compared to placebo.[9] People in the mental health system in the western world diagnosed with serious mental illness like schizophrenia now have about a 20 year reduced life expectancy compared to the general population, most of which is attributable to neuroleptic and other psychiatric drug use.

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[7] M. Harrow and T. Jobe, "Factors involved in Outcome and Recovery in Schizophrenia Patients not on Antipsychotic Medications: A 15-year Multifollow-up Study. *The Journal of Nervous and mental Disease*, 195 (2007): 406-411.

[8] Wunderink L, Nieboer RM, Wiersma D, et al. Recovery in remitted first-episode psychosis at 7 years of follow-up of an early dose reduction/discontinuation or maintenance treatment strategy: long-term follow-up of a 2-year randomized clinical trial. *JAMA Psychiatry,* 70 (2013):913-20.

[9] Schneider LS, et al. *JAMA* 2005;294:1934–43.

29. Psychiatric drugs are the third biggest cause of death after heart disease and cancer.[10] These deaths are usually "invisible" for the doctors because people may die from heart problems, suicide and falls even without taking psychiatric drugs.

30. Neuroleptics cripple people. They cause irreversible brain damage in a dose related fashion and dramatically decrease people's prospects of getting back to a normal life; they create dependency, abstinence symptoms if people try to stop and supersensitivity psychosis.[11] They are some of the most toxic drugs ever made apart from chemotherapy for cancer.

31. Neuroleptics have killed hundreds of thousands of people and have crippled tens of millions.[12]

32. The primary benefit of neuroleptics being forced on a patient is to make it easier for the staff, not for the patient's benefit.

C. Feasible, Less Restrictive and Less Intrusive Alternatives

33. There are feasible, less restrictive and less intrusive alternatives that provide a much greater probability of recovery without the great risk of harm.

34. Dr. Loren Mosher, the head of the Center for Studies of Schizophrenia from 1968 until 1980 at the National Institute of Mental Health testified in 2003 that in his

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[10] Gøtzsche PC. Deadly psychiatry and organised denial. Copenhagen: People's Press; 2015.

[11] Gøtzsche PC. Deadly psychiatry and organised denial. Copenhagen: People's Press; 2015; Breggin P. Medication madness. New York: St. Martin's Griffin; 2008.

[12] Gøtzsche PC. Deadly psychiatry and organised denial. Copenhagen: People's Press; 2015

long career he had never committed anyone because he made it his business to form the kind of relationship that he and the patient can establish an ongoing treatment plan that is acceptable to the both of them.[13]

35. Akershus University Hospital in Norway doesn't have a regime for rapid tranquillisation and has never needed one in the last 20 years.

36. In Trieste, Italy, force is not used at all. The head of psychiatry in Trieste states that coercion has to be completely eliminated, since the employees would otherwise use coercion and not use other approaches that do not require coercion.

37. Enabling force encourages force, or in other words: violence breeds violence; there are feasible non-coercive alternatives.

D. Conclusions

38. In my opinion, which is solidly based on scientific facts, administering a psychotropic medication or medications to a patient against his or her will is not in his or her best interest.

[13] Transcript of Proceedings, p. 177, in *In the Matter of Faith Myers*, Superior Court in Anchorage, Third Judicial District, State of Alaska, Case No. 3AN-02-00277 CI, cited in J. Gottstein, Involuntary Commitment and Forced Drugging in the Trial Courts: Rights Violations as a Matter of Course. 25 Alaska L.Rev51, 76 (2008).

39. In my opinion, there are feasible less intrusive alternatives to administering a psychotropic medication or medications against a patient's will.

FURTHER YOUR AFFIANT SAYETH NAUGHT.

DATED this 1 day of June 2016.

Peter C. Gøtzsche, MD

SUBSCRIBED AND SWORN TO before me this 1st day of June, 2016.

OFFICIAL SEAL
THE STATE OF ALASKA
NOTARY PUBLIC
Jennifer Wildman
Comm. Expires: Jan. 12, 2019
Comm. Number: 150112010

Notary Public in and for Alaska
My Commission Expires: 01-12-19

State of Alaska)
)ss
Third Judicial District)

I, James B. Gottstein, hereby affirm that this reproduction of Affidavit of Peter C. Gotzsche, MD, to which this is appended, is a true, correct, and complete copy of the original in my possession.

Dated: 8/5/2019

James B. Gottstein

SUBSCRIBED AND SWORN TO before me this 5 day of August, 2019.

Notary Public
Aliya Carver
State of Alaska
Commission expires 10/13/2020
Commission # 161013008

Notary Public in and for Alaska
My Commission expires: 10-13-2020

IN THE SUPERIOR COURT FOR THE STATE OF ALASKA
THIRD JUDICIAL DISTRICT, AT ANCHORAGE

In The Matter of the Necessity for the)
Hospitalization of W[redacted])
Respondent,)
[redacted])
[redacted])
Case No. 3AN 07-1064 P/S

AFFIDAVIT OF ROBERT WHITAKER

STATE OF MASSACHUSETTS)
) ss.
SUFFOLK COUNTY)

By Robert Whitaker

I. Personal Background

1. As a journalist, I have been writing about science and medicine, in a variety of forums, for about 20 years. My relevant experience is as follows:

a) From 1989 to 1994, I was the science and medical writer for the *Albany Times Union* in Albany, New York.

b) During 1992-1993, I was a fellow in the Knight Fellowship for Science Writers at the Massachusetts Institute of Technology.

c) From 1994-1995, I was director of publications at Harvard Medical School.

d) In 1994, I co-founded a publishing company, CenterWatch, that reported on the clinical development of new drugs. I directed the company's editorial operations until late 1998, when we sold the company. I continued to write freelance articles for the *Boston Globe* and various magazines during this period.

e) Articles that I wrote on the pharmaceutical industry and psychiatry for the *Boston Globe* and *Fortune* magazine won several national awards, including the George Polk Award for medical writing in 1999, and the National Association of Science Writers award for best magazine article that same year. A series I wrote for the *Boston Globe* on problems in psychiatric research was a finalist for the Pulitzer Prize in Public Service in 1999.

f) Since 1999, I have focused on writing books. My first book, *Mad in America*, reported on our country's treatment of the mentally ill throughout its history, and explored in particular why schizophrenia patients fare so much worse in the United States and other developed countries than in the poor countries of the world. The book was picked by *Discover* magazine as one of the best science books of 2002; the American Library Association named it as one of the best histories of 2002.

2. Prior to writing *Mad in America*, I shared conventional beliefs about the nature of schizophrenia and the need for patients so diagnosed to be on antipsychotic medications for life. I had interviewed many psychiatric experts who told me that the drugs were like "insulin for diabetes" and corrected a chemical imbalance in the brain.

3. However, while writing a series for the *Boston Globe* during the summer of 1998, I came upon two studies that looked at long-term outcomes for schizophrenia patients that raised questions about this model of care. First, in 1994, Harvard researchers reported that outcomes for schizophrenia patients in the United States had declined in the past 20 years and were now no better than they had been in 1900.[1] Second, the World Health Organization twice found that schizophrenia patients in the poor countries of the world fare much better than in the U.S. and other "developed" countries, so much so that they concluded that living in a developed country was a

[1] Hegarty, J, et al. "One hundred years of schizophrenia: a meta-analysis of the outcome literature." *American Journal of Psychiatry* 151 (1994):1409-16.

"strong predictor" that a person so diagnosed would never recover.[2,3] Although the WHO didn't identify a reason for that disparity in outcomes, it did note a difference in the use of antipsychotic medications between the two groups. In the poor countries, only 16% of patients were regularly maintained on antipsychotic medications, whereas in the U.S. and other rich countries, this was the standard of care, with 61% of schizophrenia patients staying on the drugs continuously. (Exhibit 1)

4. I wrote *Mad in America*, in large part, to investigate why schizophrenia patients in the U.S. and other developed countries fare so poorly. A primary part of that task was researching the scientific literature on schizophrenia and antipsychotic drugs.

II. Overview of Research Literature on Schizophrenia and Standard Antipsychotic Medications

5. Although the public has often been told that people with schizophrenia suffer from too much "dopamine" in the brain, researchers who investigated this hypothesis during the 1970s and 1980s were unable to find evidence that people so diagnosed have, in fact, overactive dopamine systems. Within the psychiatric research community, this was widely acknowledged in the late 1980s and early 1990s. As Pierre Deniker, who was one of the founding fathers of psychopharmacology, confessed in 1990: "The dopaminergic theory of schizophrenia retains little credibility for psychiatrists."[4]

6. Since people with schizophrenia have no known "chemical imbalance" in the brain, antipsychotic drugs cannot be said to work by "balancing" brain chemistry. These drugs are not like "insulin for diabetes." They do not serve as a corrective to a known biological abnormality. Instead, Thorazine and other standard antipsychotics (also known as

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[2] Leff, J, et al. "The international pilot study of schizophrenia: five-year follow-up findings." *Psychological Medicine* 22 (1992):131-45.

[3] Jablensky, A, et al. "Schizophrenia: manifestations, incidence and course in different cultures, a World Health Organization ten-country study." *Psychological Medicine* 20, monograph supplement, (1992):1-95.

[4] Deniker, P. "The neuroleptics: a historical survey." *Acta Psychiatrica Scandinavica* 82, supplement 358 (1990):83-87.

neuroleptics) work by powerfully blocking dopamine transmission in the brain. Specifically, these drugs block 70% to 90% of a particular group of dopamine receptors known as D2 receptors. This thwarting of normal dopamine transmission is what causes the drugs to be so problematic in terms of their side effects.

8. Psychiatry's belief in the necessity of using the drugs on a continual basis stems from two types of studies.

a) First, research by the NIMH has shown that the drugs are more effective than placebo in curbing psychotic symptoms over the short term (six weeks).[5]

b) Second, researchers have found that if patients abruptly quit taking antipsychotic medications, they are at high risk of relapsing. [6]

9. Although the studies cited above provide a rationale for continual drug use, there is a long line of evidence in the research literature, one that is not generally known by the public or even by most psychiatrists, that shows that these drugs, over time, produce these results:

a) They increase the likelihood that a person will become chronically ill.
b) They cause a host of debilitating side effects.
c) They lead to early death.

III. Evidence Revealing Increased Chronicity of Psychotic Symptoms

10. In the early 1960s, the NIMH conducted a six-week study of 344 patients at nine hospitals that documented the efficacy of antipsychotics in knocking down psychosis

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[5] Cole, J, et al. "Phenothiazine treatment in acute schizophrenia." *Archives of General Psychiatry* 10 (1964):246-61.
[6] Gilbert, P, et al. "Neuroleptic withdrawal in schizophrenic patients." *Archives of General Psychiatry* 52 (1995):173-188.

over a short term. (See footnote five, above). The drug-treated patients fared better than the placebo patients over the short term. However, when the NIMH investigators followed up on the patients one year later, they found, much to their surprise, that it was the drug-treated patients who were more likely to have relapsed/ This was the first evidence of a paradox: Drugs that were effective in curbing psychosis over the short term were making patients more likely to become psychotic over the long term.[7]

11. In the 1970s, the NIMH conducted three studies that compared antipsychotic treatment with "environmental" care that minimized use of the drugs. In each instance, patients treated without drugs did better over the long term than those treated in a conventional manner.[8, 9, 10] Those findings led NIMH scientist William Carpenter to conclude that "antipsychotic medication may make some schizophrenic patients more vulnerable to future relapse than would be the case in the natural course of the illness."

12. In the 1970s, two physicians at McGill University, Guy Chouinard and Barry Jones, offered a biological explanation for why this is so. The brain responds to neuroleptics and their blocking of dopamine receptors as though they are a pathological insult. To compensate, dopaminergic brain cells increase the density of their D2 receptors by 40% or more. The brain is now "supersensitive" to dopamine, and as a result, the person has become more *biologically* vulnerable to psychosis than he or she would be naturally. The two Canadian researchers wrote: "Neuroleptics can produce a dopamine supersensitivity that leads to both dyskinetic and psychotic symptoms. An implication is that the tendency

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[7] Schooler, N, et al. "One year after discharge: community adjustment of schizophrenic patients." *American Journal of Psychiatry* 123 (1967):986-95.

[8] Rappaport, M, et al. "Are there schizophrenics for whom drugs may be unnecessary or contraindicated?" *Int Pharmacopsychiatry* 13 (1978):100-11.

[9] Carpenter, W, et al. "The treatment of acute schizophrenia without drugs." *American Journal of Psychiatry* 134 (1977):14-20.

[10] Bola J, et al. "Treatment of acute psychosis without neuroleptics: two-year outcomes from the Soteria project." *Journal of Nervous Mental Disease* 191 (2003):219-29.

toward psychotic relapse in a patient who had developed such a supersensitivity is determined by more than just the normal course of the illness. [11]

13. MRI-imaging studies have powerfully confirmed this hypothesis. During the 1990s, several research teams reported that antipsychotic drugs cause atrophy of the cerebral cortex and an enlargement of the basal ganglia.[12, 13, 14] In 1998, investigators at the University of Pennsylvania reported that the drug-induced enlargement of the basal ganglia is "associated with greater severity of both negative and positive symptoms." In other words, they found that the drugs cause morphological changes in the brain that are associated with a worsening of the very symptoms the drugs are supposed to alleviate.[15]

IV. Research Showing that Recovery Rates are Higher for Non-Medicated Patients than for Medicated Patients.

14. The studies cited above show that the drugs increase the chronicity of psychotic symptoms over the long term. There are also now a number of studies documenting that long-term recovery rates are much higher for patients off antipsychotic medications. Specifically:

a) In 1994, Courtenay Harding at Boston University reported on the long-term outcomes of 82 chronic schizophrenics discharged from Vermont State Hospital in the late 1950s. She found that one-third of this cohort had recovered

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[11] Chouinard, G, et al. "Neuroleptic-induced supersensitivity psychosis." *American Journal of Psychiatry* 135 (1978):1409-10. Also see Chouinard, G, et al. "Neuroleptic-induced supersensitivity psychosis: clinical and pharmacologic characteristics." *American Journal of Psychiatry* 137(1980):16-20.

[12] Gur, R, et al. "A follow-up magnetic resonance imaging study of schizophrenia." *Archives of General Psychiatry* 55 (1998):142-152.

[13] Chakos M, et al. "Increase in caudate nuclei volumes of first-episode schizophrenic patients taking antipsychotic drugs." *American Journal of Psychiatry* 151 (1994):1430-6.

[14] Madsen A, et al. "Neuroleptics in progressive structural brain abnormalities in psychiatric illness." *The Lancet* 352 (1998): 784-5.

[15] Gur, R, et al. "Subcortical MRI volumes in neuroleptic-naive and treated patients with schizophrenia." *American Journal of Psychiatry* 155 (1998):1711-17.

completely, and that all who did shared one characteristic: They had all stopped taking antipsychotic medication. The notion that schizophrenics needed to stay on antipsychotics all their lives was a "myth," Harding said.[16, 17, 18]

b) In the World Health Organization studies, 63% of patients in the poor countries had good outcomes, and only one-third became chronically ill. In the U.S. countries and other developed countries, only 37% of patients had good outcomes, and the remaining patients did not fare so well. In the undeveloped countries, only 16% of patients were regularly maintained on antipsychotics, versus 61% of patients in the developed countries.

c) In response to this body of literature, physicians in Switzerland, Sweden and Finland have developed programs that involve minimizing use of antipsychotic drugs, and they are reporting much better results than what we see in the United States.[19, 20, 21, 22] In particular, Jaako Seikkula recently reported that five years after initial diagnosis, 82% of his psychotic patients are symptom-free, 86% have returned to their jobs or to school, and only 14% of his patients are on antipsychotic medications.[23]

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[16] Harding, C. "The Vermont longitudinal study of persons with severe mental illness," *American Journal of Psychiatry* 144 (1987):727-34.

[17] Harding, C. "Empirical correction of seven myths about schizophrenia with implications for treatment." *Acta Psychiatrica Scandinavica* 90, suppl. 384 (1994):140-6.

[18] McGuire, P. "New hope for people with schizophrenia," *APA Monitor* 31 (February 2000).

[19] Ciompi, L, et al. "The pilot project Soteria Berne." *British Journal of Psychiatry* 161, supplement 18 (1992):145-53.

[20] Cullberg J. "Integrating psychosocial therapy and low dose medical treatment in a total material of first-episode psychotic patients compared to treatment as usual." *Medical Archives* 53 (199):167-70.

[21] Cullberg J. "One-year outcome in first episode psychosis patients in the Swedish Parachute Project. *Acta Psychiatrica Scandinavica* 106 (2002):276-85.

[22] Lehtinen V, et al. "Two-year outcome in first-episode psychosis according to an integrated model. *European Psychiatry* 15 (2000):312-320.

[23] Seikkula J, et al. Five-year experience of first-episode nonaffective psychosis in open-dialogue approach. *Psychotherapy Research* 16/2 (2006): 214-228.

d) This spring, researchers at the University of Illinois Medical School reported on the long-term outcomes of schizophrenia patients in the Chicago area since 1990. They found that 40% of those who refused to take their antipsychotic medications were recovered at five-year and 15-year followup exams, versus five percent of the medicated patients.[24]

V. Harmful Side Effects from Antipsychotic Medications

15. In addition to making patients chronically ill, standard antipsychotics cause a wide range of debilitating side effects. Specifically:

a) Tardive dyskinesia. The most visible sign of tardive dyskinesia is a rhythmic movement of the tongue, which is the result of permanent damage to the basal ganglia, which controls motor movement. People suffering from tardive dyskinesia may have trouble walking, sitting still, eating, and speaking. In addition, people with tardive dyskinesia show accelerated cognitive decline. NIMH researcher George Crane said that tardive dyskinesia resembles "in every respect known neurological diseases, such as Huntington's disease, dystonia musculorum deformans, and postencephalitic brain damage."[25] Tardive dyskinesia appears in five percent of patients treated with standard neuroleptics in one year, with the percentage so afflicted increasing an additional five percent with each additional year of exposure.

[24] Harrow M, et al. "Factors involved in outcome and recovery in schizophrenia patients not on antipsychotic medications." *Journal of Nervous and Mental Disease* 195 (2007): 406-414.

[25] Crane, G. "Clinical psychopharmacology in its 20th year," *Science* 181 (1973):124-128. Also see American Psychiatric Association, *Tardive Dyskinesia: A Task Force Report* (1992).

b) Akathisia. This is an inner restlessness and anxiety that many patients describe as the worst sort of torment. This side effect has been linked to assaultive, murderous behavior.[26, 27, 28, 29, 30]

c) Emotional impairment. Many patients describe feeling like "zombies" on the drugs. In 1979, UCLA psychiatrist Theodore van Putten reported that most patients on antipsychotics were spending their lives in "virtual solitude, either staring vacantly at television, or wandering aimlessly around the neighborhood, sometimes stopping for a nap on a lawn or a park bench . . . they are bland, passive, lack initiative, have blunted affect, make short, laconic replies to direct questions, and do not volunteer symptoms . . . there is a lack not only of interaction and initiative, but of any activity whatsoever.[31] The quality of life on conventional neuroleptics, researchers agreed, is "very poor." [32]

d) Cognitive impairment. Various studies have found that neuroleptics reduce one's capacity to learn and retain information. As Duke University scientist Richard Keefe said in 1999, these drugs may "actually prevent adequate learning effects and worsen motor skills, memory function, and executive abilities, such as problem solving and performance assessment."[33]

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[26] Shear, K et al. "Suicide associated with akathisia and deport fluphenazine treatment," *Journal of Clinical Psychopharmacology* 3 (1982):235-6.
[27] Van Putten, T. "Behavioral toxicity of antipsychotic drugs." *Journal of Clinical Psychiatry* 48 (1987):13-19.
[28] Van Putten, T. "The many faces of akathisia," *Comprehensive Psychiatry* 16 91975):43-46.
[29] Herrera, J. "High-potency neuroleptics and violence in schizophrenia," *Journal of Nervous and Mental Disease* 176 (1988):558-561.
[30] Galynker, I. "Akathisia as violence." *Journal of Clinical Psychiatry* 58 (1997):16-24.
[31] Van Putten, T. "The board and care home." *Hospital and Community Psychiatry* 30 (1979):461-464.
[32] Weiden P. "Atypical antipsychotic drugs and long-term outcome in schizophrenia." *Journal of Clinical Psychiatry* 57, supplement 11 (1996):53-60.
[33] Keefe, R. "Do novel antipsychotics improve cognition?" *Psychiatric Annals* 29 (1999):623-629.

d) Other side effects of standard neuroleptics include an increased incidence of blindness, fatal blood clots, arrhythmia, heat stroke, swollen breasts, leaking breasts, obesity, sexual dysfunction, skin rashes and seizures, and early death.[34, 35, 36] Schizophrenia patients now commit suicide at 20 times the rate they did prior to the use of neuroleptics.[37]

VI. The Research Literature on Atypical Antipsychotics

16. The conventional wisdom today is that the "atypical" antipsychotics that have been brought to market—Risperdal, Zyprexa, and Seroquel, to name three—are much better and safer than Haldol, Thorazine and the other older drugs. However, it is now clear that the new drugs have no such advantage, and there is even evidence suggesting that they are worse than the old ones.

17. Risperdal, which is manufactured by Janssen, was approved in 1994. Although it was hailed in the press as a "breakthrough "medication, the FDA, in its review of the clinical trial data, concluded that there was no evidence that this drug was better or safer than Haldol (haloperidol.) The FDA told Janssen: "We would consider any advertisement or promotion labeling for RISPERDAL false, misleading, or lacking fair balance under section 501 (a) and 502 (n) of the ACT if there is presentation of data that conveys the impression that risperidone is superior to haloperidol or any other marketed antipsychotic drug product with regard to safety or effectiveness."[38]

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[34] Arana, G. "An overview of side effects caused by typical antipsychotics." *Journal of Clinical Psychiatry* 61, supplement 8 (2000):5-13.

[35] Waddington, J. "Mortality in schizophrenia." *British Journal of Psychiatry* 173 (1998):325-329.

[36] Joukamaa, M, et al. Schizophrenia, neuroleptic medication and mortality. *British Journal of Psychiatry* 188 (2006):122-127.

[37] Healy, D et al. "Lifetime suicide rates in treated schizophrenia." *British Journal of Psychiatry* 188 (2006):223-228.

[38] FDA approval letter from Robert Temple to Janssen Research Foundation, December 21, 1993.

18. After Risperdal (risperidone) was approved, physicians who weren't funded by Janssen were able were able to conduct independent studies of the drug. They concluded that risperidone, in comparison to Haldol, caused a higher incidence of Parkinsonian symptoms; that it was more likely to stir akathisia; and that many patients had to quit taking the drug because it didn't knock down their psychotic symptoms.[39, 40, 41, 42, 43] Jeffrey Mattes, director of the Psychopharmacology Research Association, concluded in 1997: "It is possible, based on the available studies, that risperidone is not as effective as standard neuroleptics for typical positive symptoms."[44] Letters also poured into medical journals linking risperidone to neuroleptic malignant syndrome, tardive dyskinesia, tardive dystonia, liver toxicity, mania, and an unusual disorder of the mouth called "rabbit syndrome."

19. Zyprexa, which is manufactured by Eli Lilly, was approved by the FDA in 1996. This drug, the public was told, worked in a more "comprehensive" manner than either risperidone or haloperidol, and was much "safer and more effective" than the standard neuroleptics. However, the FDA, in its review of the trial data for Zyprexa, noted that Eli Lilly had designed its studies in ways that were "biased against haloperidol." In fact, 20 of the 2500 patients treated with Zyprexa in the trials died. Twenty-two percent of the Zyprexa patients suffered a "serious" adverse event, compared to 18 percent of the Haldol patients. There was also evidence that Zyprexa caused some sort of metabolic dysfunction, as patients gained nearly a pound per week. Other problems that showed up in Zyprexa patients included Parkinsonian symptoms, akathisia, dystonia, hypotension,

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[39] Rosebush, P. "Neurologic side effects in neuroleptic-naïve patients treated with haloperidol or risperidone." *Neurology* 52 (1999):782-785.

[40] Knable, M. "Extrapyramidal side effects with risperidone and haloperidol at comparable D2 receptor levels." *Psychiatry Research: Neuroimaging Section* 75 (1997):91-101.

[41] Sweeney, J. "Adverse effects of risperidone on eye movement activity." *Neuropsychopharmacology* 16 (1997):217-228.

[42] Carter, C. "Risperidone use in a teaching hospital during its first year after market approval." *Psychopharmacology Bulletin* 31 (1995):719-725.

[43] Binder, R. "A naturalistic study of clinical use of risperidone." *Psychiatric Services* 49 (1998):524-6.

[44] Mattes, J. "Risperidone: How good is the evidence for efficacy?" *Schizophrenia Bulletin* 23 (1997):155-161.

constipation, tachycardia, seizures, liver abnormalities, white blood cell disorders, and diabetic complications. Moreover, two-thirds of the Zyprexa patients were unable to complete the trials either because the drugs didn't work or because of intolerable side effects.[45]

20. There is now increasing recognition in scientific circles that the atypical antipsychotics are no better than the old drugs, and may in fact be worse. Specifically:

a) In 2000, a team of English researchers led by John Geddes at the University of Oxford reviewed results from 52 studies, involving 12,649 patients. They concluded: "There is no clear evidence that atypicals are more effective or are better tolerated than conventional antipsychotics." The English researchers noted that Janssen, Eli Lilly and other manufacturers of atypicals had used various ruses in their clinical trials to make their new drugs look better than the old ones. In particular, the drug companies had used "excessive doses of the comparator drug."[46]

b) In 2005, a National Institute of Mental Health study found that that were "no significant differences" between the old drugs and the atypicals in terms of their efficacy or how well patients tolerated them. Seventy-five percent of the 1432 patients in the study were unable to stay on antipsychotics owing to the drugs' "inefficacy or intolerable side effects," or for other reasons.[47]

c) In 2007, a study by the British government found that schizophrenia patients had better "quality of life" on the old drugs than on the new ones.[48] This finding was

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[45] See Whitaker, R. *Mad in America*. New York: Perseus Press (2002):279-281.
[46] Geddes, J. "Atypical antipsychotics in the treatment of schizophrenia." *British Medical Journal* 321 (2000):1371-76.
[47] Lieberman, J, et al. "Effectiveness of antipsychotic drugs in patients with schizophrenia." *New England Journal of Medicine* 353 (2005):1209-1233.
[48] Davies, L, et al. "Cost-effectiveness of first- v. second-generation antipsychotic drugs." *The British Journal of Psychiatry* 191 (2007):14-22.

quite startling given that researchers had previously determined that patients medicated with the old drugs had a "very poor" quality of life.

20. There is also growing evidence that the atypicals may be exacerbating the problem of early death. Although the atypicals may not clamp down on dopamine transmission quite as powerfully as the old standard neuroleptics, they also block a number of other neurotransmitter systems, most notably serotonin and glutamate. As a result, they may cause a broader range of physical ailments, with diabetes and metabolic dysfunction particularly common for patients treated with Zyprexa. In a 2003 study of Irish patients, 25 of 72 patients (35%) died over a period of 7.5 years, leading the researchers to conclude that the risk of death for schizophrenics had "doubled" since the introduction of the atypical antipsychotics.[49]

VII. Conclusion

21. In summary, the research literature reveals the following:

a) Antipsychotics increase the likelihood that a person will become chronically ill.

b) Long-term recovery rates are much higher for unmedicated patients than for those who are maintained on antipsychotic drugs.

c) Antipsychotics cause a host of debilitating physical, emotional and cognitive side effects, and lead to early death.

[49] Morgan, M, et al. "Prospective analysis of premature morbidity in schizophrenia in relation to health service engagement." *Psychiatry Research* 117 (2003):127-35.

d) The new "atypical" antipsychotics are not better than the old ones in terms of their safety and tolerability, and quality of life may even be worse on the new drugs than on the old ones.

DATED this 4 day of September, 2007, in Cambridge, Massachusetts.

Robert B. Whitaker

Robert Whitaker

SUBSCRIBED AND SWORN TO before me this 4th day of September, 2007.

Notary Public in and for Massachusetts
My Commission Expires: August 6, 2013

TENZIN DEMAY
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
August 6, 2013

State of Alaska)
)ss
Third Judicial District)

I, James B. Gottstein, hereby affirm that this reproduction of Affidavit of Robert Whitaker, to which this is appended, is a true, correct and, except for removal of identifying information, complete photocopy of the original filed in 3AN 07-1064PR, Superior Court for the State of Alaska, Third Judicial District at Anchorage.

Dated: 8/5/2014

James B. Gottstein

SUBSCRIBED AND SWORN TO before me this 5 day of August, 2014.

Notary Public
Aliya Carver
State of Alaska
Commission expires 10/13/2020
Commission # 161013008

Aliya Carver

Notary Public in and for Alaska
My Commission expires: 10-13-2020