worsening paranoia had resulted in termination of his visiting nurse services that administered injections and in home assessments, his outpatient psychiatrist allowed him to self-administer bi-monthly injections. Over three weeks in the hospital, he was evaluated for signs and symptoms of antipsychotic overdose.

**RESULTS:** Initial literature review did not reveal information involving an overdose of injectable Risperidone. Thus, the time frame and symptoms to monitor were uncertain. As the injectable medication was expected to peak in 2-3 weeks and persist for 4-6 weeks, there was a concern about delayed potential side effects such as EPS, sedation, QTC prolongation and electrolytes imbalances. He was treated with oral antipsychotic medication. Clozapine and doxepin were discontinued due to patient non-adherence, side effects, and drug interactions. He exhibited signs of EPS and was started on benztropine. To simplify his regimen, he was switched to another long acting injectable, Paliperidone Palmitate, prior to his discharge.

**CONCLUSIONS:** Given the nature of the presentation, he was advised not to self-administer injectable medication and was referred for visiting nurse services. He was educated on the potential side effects of injectable antipsychotic medication. As there was a change in antipsychotic medications, follow up was recommended in an intensive outpatient program for psychotic symptoms and prolonged side effects. Due to the patient's concordant episode of loss of consciousness, he was advised to follow up with an outpatient long term EEG monitoring and complete Neurology evaluation.

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## AXONA (Caprylidene): Medical Food Therapy For Alzheimer's Disease

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**OBJECTIVES:** Evaluate the current novel food therapy for Alzheimer and its adverse effects. What is the response to Axona (Capylidene) in different ethnicities and determine the generalizability of the drug use in diverse populations. What genes are linked with positive responses? What are the implications of its use in high risk populations? Its role in early detection of Alzheimer's and the arrest of the neurodegeneration in APO E4 (-) patients.

**METHOD:** PubMed was queried with the search terms 'Axona' OR 'Caprylidene' and the following articles were collected and reviewed.

**RESULTS:** Among the articles collected and reviewed, two studies extensively evaluated the safety and efficacy of using Medium Chain Triglycerides (MCT) in Alzheimer's disease. These studies genotyped patients for APO E4 status (positive/negative). According to the Reger et al. study in 2002, treatment of APOE4 (-ve) patients with MCTs reported a considerable improvement in comparison to placebo-treated patients ($P = 0.04$). The second study by Henderson et al. in 2009 demonstrated an improvement in cognitive functioning determined by Alzheimer's disease Assessment Scale- cognitive subscale (ADAS-Cog) scores in those treated with MCTs versus placebo in APOE4 -ve patients. An open label Japanese pilot study also showed improvement in cognitive functioning with Caprylidene in APOE4 (-ve) patients with Mini Mental Status Exam (MMSE) score > 14.

**DISCUSSION:** The FDA approved treatment options in Alzheimer's disease include acetylcholinesterase inhibitors (Rivastigmine, Donepezil and Galantamine), NMDA receptor antagonist (Memantine). These drugs only delay the progression of the disease in these patients.
MCTs are classified as medical foods, which are defined as substances that provide a specific nutritional need in a patient that cannot be satisfied by modification of a normal diet alone The FDA approved Axona as medicalfood for specific dietary management of the disease in 2009. Early metabolic changes in Alzheimer's Diseaseprior to cognitive decline and plaque deposition can possibly be prevented by early intervention with Axona, especially in high risk population (APOE4 (þ), Downs syndrome).
These trials highlight the benefits of MCT in a discrete group, and the importance of routine genomic testing in Alzheimer patients in clinical settings. A better understanding into Caprylidene's pharmacokinetics and pharmacodynamics will help us in the prevention and intervention of patients based on their genetic profiles.

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## Second Generation Antipsychotics and Catatonia: A Literature Review

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**ABSTRACT:** Introduction: Catatonia is an underrecognized neuropsychiatric syndrome affecting approximately 10% of individuals hospitalized on inpatient psychiatric units. First-line treatments for this condition include benzodiazepines (BZD) and/or electroconvulsive therapy (ECT). However, 20-40% of individuals do not respond to BZD alone and ECT is not always accessible. Second generation antipsychotics (SGA) have been used to treat catatonia in these circumstances. Here, we review the literature pertaining to the efficacy and safety of SGA in the treatment of catatonia.

**METHODS:** We conducted a PubMed search for articles linking catatonia to antipsychotics, under the search heading "catatonia" or "kahlbaum" and "risperidone", "amisulpride", "iloperidone", "olanzapine", "aripiprazole", "paliperidone", "clozapine", "brexpiprazole", or "cariprazine". Reports commenting on SGA treatment efficacy and/or their role in the development of catatonia were included in the analysis. Selected articles were reviewed for patient demographics, psychiatric/medical history, symptoms, cause of catatonia and treatment, and co-administered agents. For each SGA, we calculated the number of cases in which catatonia was likely improved with antipsychotic treatment, and the number of cases in which catatonia was precipitated or worsened with antipsychotic treatment (improved/worsened ratio). Case data was assessed using the Naranjo Adverse Drug Reaction Probability Scale. Descriptive statistics were used to analyze the data.

**RESULTS:** At the time this abstract was written, we reviewed 480 of the original 507 articles. One hundred and seventeen of the 480 met inclusion criteria. There was one randomized controlled trial (RCT), five prospective studies, four retrospective studies and 107 case reports. Of all reviewed literature quetiapine (34:3, 92%), aripiprazole (16:2, 89%), amisulpride (18:1, 95%), andclozapine (19:1, 95%) had the highest improved/worsened ratio, conversely paliperidone (0:5, 0%) had the lowest improved/worsened ratio.

**CONCLUSION:** Of the available literature quetiapine, amisulpride, aripiprazole, and clozapine were found to be relatively safe andeffective as treatment options in catatonia, while palipderidone was found to have reports pointing to its role in the development/worsening, but none on the improvement, of catatonia. These results need to be interpreted with caution. In the majority of cases where SGA's were effective, patients were co- treated with other pharmacologic agents (most frequently benzodiazepines), making it difficult to assess the role of the antipsychotic alone. Also, given that the preponderance of studies were case reports, publication bias may be an important limitation. Further studies are needed to examine the safety and efficacy of SGA in treating catatonia.

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## Hospital Utilization Rates Following Antipsychotic Dose Reductions Among Patients With Schizophrenia

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**ABSTRACT:** Introduction: Tardive dyskinesia (TD), an often-irreversible movement disorder, develops in patients treated withantipsychotics. Although antipsychotic dose reduction has been utilized in the management of TD, the benefits and risks of lowering doses have not been well studied and could cause additional burden to patients.

**OBJECTIVE:** To analyze the healthcare burden of antipsychotic dose reduction in patients with schizophrenia.

**METHODS:** Medical claims from six US states spanning 6 years are retrospectively analyzed for ≥10% or ≥30% antipsychotic dosereductions and compared with those from patients receiving stable doses. Outcomes measured include inpatient admissions and emergency room (ER) visits for schizophrenia, all psychiatric disorders, and all causes.

**RESULTS:** Baseline analysis revealed 17,984 patients with ≥10% and 14,029 patients with ≥30% dose reduction. Patients with ≥ 10% dose reduction and matched controls

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