Understanding the Influence of Antipsychotics on Weight Gain

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Abstract

Doctors and health professionals have a problem understanding the influence of anti-psychotics on weight gain. They can agree that Clozaril causes weight gain - and that they all have different theories as to why. Some say carbohydrates, some say increased appetite, but they can all agree that there is no definitive research which identifies the reason as to why Clozaril (and most anti-psychotics) cause substantial weight gain. Since Clozaril (considered the gold-standard of anti-psychotic medication) is so effective at treating the effects of psychiatric illnesses doctors push aside the allotment of research on the medication indicating substantial weight gain over time. In this research paper alone, I report on several studies which discuss weight gain on Clozaril and they all have two things in common – Clozapine causes weight gain (no-less than 7% of baseline weight) and their findings on how to counter the induced weight gain is in no matter substantiated. Simply put, there is currently no definitive research on the topic of addressing the weight gain almost all patients incur while taking the anti-psychotic medication clozapine.

*Keywords*: Clozaril, Clozapine, Medication Induced Weight Gain, Anti-psychotic Induced Weight Gain, Anti-psychotic Medication, Weight Gain
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Thesis is supported by both individual and tested medical research to arrive at startling hypothesis. This is the original piece of writing which leads to this conclusion on the topic of Clozaril and weight gain.

**Thesis Statement**

In analysis of a vast amount of scholarly research on the effect of Clozapine-induced weight gain I have concluded that it is not feasible in any construct for patients taking Clozaril to lose any significant amount of weight while taking the medication.

**Introduction**

All medications intended to treat psychiatric illnesses have tested as relating directly to weight gain in patients taking these medications and there is no evidence pertaining to the concept of counteracting this side effect. When physicians are confronted with the question as to why patients gain substantial weight while taking anti-psychotic medications, the answer is usually unique to the interests of the psychiatrist. Patients will hear – reduce caloric intake, limit carbohydrates, do cardiovascular and plyometric exercise but after a self-study along with sufficient research I have concluded that weight gain of patients taking Clozaril is imminent. This paper is a combination of what I have done using diet and exercise and how it has changed the make-up of my body along with research supported theses which help identify the contributing factors as to why patients gain weight on psychiatric medications.

**Research Introduction.**

While Clozapine-induced weight-gain is undeniable, for decades’ doctors have been prescribing the medication and dismissing the supported research as it is considered the “gold-standard” of psychiatric treatment. Instead of worrying about weight gain – doctors are more
concerned about psychiatric effects on the body to counteract psychiatric illness. The American Journal of Psychiatry writes “The results support the hypothesis that patients treated with clozapine experience significant weight gain… and appear to be at an increased risk of developing diabetes.” While the thesis that clozapine-induced weight gain is supported by tested research, most doctors prescribing the medication commonly dismiss the claim with rhetoric most would hear from a personal trainer (Aronson 2004).

Weight Gain with Antipsychotics reads "Of antipsychotic medications, there is evidence that clozapine may produce the most weight gain" (Covell 2004). Additionally, of anti-psychotic medications, Covell writes that Clozapine has the largest impact on weight in a Yale-based study which concluded an average of a 7% increase in baseline weight. The study also noted that the average anti-psychotic medication caused a 4% increase of weight over time except for the antipsychotic Geodon (Ziprasidone) which had virtually no distinctive weight gain over time in patients taking the medication.

**Self-Study on Antipsychotic-Induced Weight Gain.**

In 2014 I was again put onto Clozaril and during a 30-day period went from 230 pounds to 271 pounds. My psychiatrist at the time pointed to what any psychiatrist would point to regarding Clozaril related weight gain - my appetite and a “lack of exercise” was the culprit. In April of 2016 I started cataloguing my workouts to determine which exercises would have the best impact on weight loss. Since then, I have worked out, on-average five to six days a week (for the past year) cataloguing weight gain along with caloric input. I started by cataloguing my workouts over a four-week period and have listed below a picture of my first week to be used as a sample.
Clearly you can see that there was a significant amount of cardiovascular exercise during this period, and the list of workouts leads almost anyone to the conclusion that I should have been losing weight. Had I not been taking Clozaril, for me to maintain a healthy weight at this level of cardiovascular and weight related exercise I would to have needed to be consuming more than five to six thousand calories a day. After working out almost daily for the past year I have noticed that while I am not really losing any weight (about ten pounds over a year) I have seen drastic changes in my body type along with my body fat percentage. Clozaril has almost no impact on the body’s ability to build muscle. When I started weight training I was around the same weight at about a 19.5% body fat percentage, and over time I have put on significant muscle and gotten leaner, but also bigger and stronger. I have lost a significant amount of weight along my waist but also increased things like the circumference of my neck which is now around...
19 inches. After about six months of training I went from 19.5% body-fat, to (using the US Naval method) 18.1% body-fat and after a year I am literally almost the exact same weight with a body-fat percentage of 16.6% (Cacciola 2017).

Since my weight "plateaued" on Clozapine I have learned that while weight gain differs depending on the patient. The medication; "clozapine" is somehow, undenounced to me a weight-regulating medication. While you can put on muscle and lose fat, your weight will stay the same, and change within an interval of only a few pounds. After one year of consistent cardiovascular & plyometric weight training I have reduced the size of my weight about 3-4 inches, gone down a size and a half in my clothing size (XXL to L/XL), and made significant progress on not only my strength – but conditioning. I have found that there is zero credible work on managing a patient’s weight while on Clozapine, but through consistent exercise; while your weight may be regulated by the medication, your body fat is not. (Cacciola, 2017)

**Studies Individualized to Topic**

While several studies have been done that support the concept that Clozaril is a weight inducing medication, very little can be done to counter-act the medications weight related side effects. A first-generation antipsychotic introduced in the 1960’s Clozaril became the gold standard in psychiatric medication because it was not “associated with motor side effects like tremor and other involuntary movements” (Covell 2004). Clozaril was the only medication of the first-generation antipsychotics which did not involve involuntary side effects or tremors. Its chemistry became the baseline for late 20th century anti-psychotics (second generation antipsychotics) which addressed symptoms while not impairing motor skills. (Cacciola, 2017)

The specifics for why the medication specifically causes weight gain are varied depending on the prescribing doctor. Most health care professionals believe that clozapine
induced weight gain is due to an increased appetite and a decrease in exercise. The differentiating factor which proves this theory wrong is the amount of time in which patients experience extreme weight gain. In a psychiatric journal the author wrote “One-third of patients gained a significant weight of 20% or more of their baseline weight within the first six months of treatment” (Covell 2004). Even more surprising is that the recurring data from weight related Clozaril research exhibits an increase of 7% or more within the first 30 days. Weight Gain with Antipsychotics reads "Of antipsychotic medications, there is evidence that clozapine may produce the most weight gain" (Covell 2014). Additionally, of anti-psychotic medications, Clozapine has the largest impact of weight in a Yale-based study of a 7% increase in weight. The study also noted that the average Anti-psychotic medication caused a 4% increase of weight over time except Geodon (Ziprasidone) which had virtually no distinctive weight gain over time. Baseline weight gain has been measured of patients taking Ziprasidone but the medication induced a maximum of five pounds or less to the patients baseline weight and did not impede any substantiated weight loss efforts.

Within the context of published papers and research the weight gain associated with Clozaril has been reported at several different levels. The Handbook of Obesity reads "There is strong evidence that both short and long-term treatment with clozapine are associated with significant weight gain. A review showed that clozapine-treated patients had at least a 10% increase in weight. A meta-analysis reported weight gain of 4.5kg over 10 weeks (on average)” (Bray, Bouchard 2014). Drug Induced Diseases writes "Average weight gains ranging from 7.5 to 10.9 kg over 6 months to 1 year of therapy have been reported in patients receiving clozapine. In one study 21% of patients... experienced a weight gain of greater than 20% of their base-line
weight…. Additional case reports have documented marked weight gains ranging from 30 to 50 kg associated with clozapine therapy” (Tisdale 2010).

When revisiting the research between anti-psychotics and weight gain one common thread is that they cause increased appetite for patients taking these medications. Covell writes that "One study used clinically-based decisions to assign individuals a regular or restricted diet and found that" regardless of gender or calorically restricted diet weight gain occurred across the board. The studies each acknowledge Clozaril induced weight gain and address it with different studies to help understand the medication along with its associated weight gain. The studies specific to clozapine-induced weight-gain read that “[The] results, taken together with reports that clozapine is associated with increases in serum triglyceride levels, and with reports of increased risk of diabetes, and insulin resistance suggest the need for preventive and ongoing (research on) individuals (being treated with) clozapine” (Covell 2004).

**Serum Triglycerides**

Lipid levels, cholesterol and other factors are tested regularly for patients taking Clozaril. These are tested between every week, to every two weeks – and every month depending on how long the patient has been taking Clozaril. Lipid levels are important specifically because of what serum triglycerides do. If you were to ask a psychiatrist “what should I do to help me lose weight” they would almost always explain that the patient must limit carbohydrate intake to begin managing their weight loss but with the supported research on serum triglycerides this leads to a similar but different conclusion within the same premise that is it is not feasible for anyone to lose any significant amount of weight while taking Clozaril. The conclusion of (non) informed board certified psychiatrists is typically that to lose weight on Clozaril you must be
active and limit carbohydrates. Yet serum triglycerides are defined as unused proteins that are stored in your system to provide your body with energy.

This is separate from the concept that lipid abnormalities are caused by increases in carbohydrate intake. The interesting thing about this is that foods which are high in serum triglycerides are not carbohydrates at all. WebMD recommends that you “limit your intake of fatty red meat, poultry, butter, lard, high-fat protein & dairy products and shellfish” (Romito, 2014). This conclusion completely counters all existing research on the concept of weight loss on the medication Clozaril. You don’t need to necessarily limit your calories, you don’t need to limit your carbohydrate intake, what you need to do is probably the last thing any doctor or medical professional would think of – limit proteins.

Conclusion

This concept of “limiting proteins” also substantiates the thesis that there is no definitive way to remedy the side effect of the substantial weight gain of patients taking Clozaril (Cacciola 2017). Regardless of what you are eating – there will undoubtedly be a substantial amount of protein in your diet. Protein isn’t only in meat and dairy, there are levels of protein in vegetables, fruits, grains; virtually all foods contain amounts of protein. If there is any means of nutritional value in what you are eating – the foods will contain amounts of proteins.

After reviewing the scholarly work of research efforts pertaining to Clozapine the medication is indicative of weight gain early on in its introduction to a patient’s medication regimen. With an average weight gain of seven percent of base-line weight gain occurring regardless of the level of fitness activity.

To strengthen this hypothesis the American Journal of Psychiatry writes “Weight gain with clozapine has been well documented. Patients in our study gained the greatest amount of
weight during the first 12 months taking Clozapine, and, in contrast to previous reports, they continued to gain weight until approximately month 46. This weight gain occurred despite active weight loss programs involving diet and exercise … Antipsychotic agents differ in their potential to cause weight gain. Risk of weight gain is greatest for those taking clozapine” (Henderson, 1999).

Also notable are the results from the self-study on Clozaril, the important factor being regardless of weight gain lack of exercise is another risk factor to patients taking Clozaril. “Patients (taking clozapine) are frequently less active because of the sedating quality of clozapine. Exercise may be a protective factor for [weight loss]” (Henderson, 1999). This is indicative of the self-study of weight management while on clozapine. The pertinent research is suggestive that high intensity interval training can hinder the ongoing weight gain of patients to counteract the increase of fat-store abnormalities and replace them with lean muscle cells (Cacciola, 2017). This shifts the body fat percentage of a patient from hoarding protein to using the protein stores to build muscle. While it would definitively not cause any reasonable change in the patients BMI other indicating factors of weight loss like waist & clothing size can be reduced within a small degree. This research indicates that weight may be regulated by clozapine but muscle mass can be altered to create a leaner physique.
References


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