

Pain Management After Near-Death Multi-Trauma

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Part One: Pain

Pain management is a topic I feel as qualified to write about as any layperson could. Since coming out of an induced coma in the Intensive Care Unit (ICU) late in 2012, and being taught to use a Patient Controlled Administration (PCA) machine to deliver intravenous fentanyl, managing pain has been one of the primary factors influencing my day-to-day life. Throughout the first few months in hospital there was not room for much more in my attention span other than tolerating the vast array of pain signals my brain was receiving. The Acute Pain Services (APS) team were extremely accommodating during this period, tirelessly trying out new combinations of drugs to see what would work best together in mitigating my pain. To have gone through my time in hospital without the service they provided is unthinkable.

Before I go any further, it is necessary to provide a short glossary of some key terms.

Opioid: A class of drugs that includes opiates (drugs derived from opium) and other drugs that act upon the same receptors. Well-known examples include morphine, heroin, codeine and our body's own endorphins. Much like heroin, the opioids used to treat pain have a very high potential for dependence and addiction, and lots of other undesirable side-effects. In spite of this, they are still generally the gold standard for severe pain.

Acute Pain: Pain that is transitory and relatively quick to resolve. The exact time of distinction between acute pain and chronic pain varies between researchers.

Chronic Pain: Pain that lasts for an extended period of time. Chronic pain can persist even after the underlying cause has been remedied.

Breakthrough Pain: Pain that comes on suddenly, often with great severity, and is largely unaffected by a patient's regular pain medication.

Neuropathic Pain: Pain caused by damage to the nervous system. Neuropathic pain often has a strong electrical component to it.

Half-Life: The amount of time it takes your body to reduce the active levels of a drug in your blood by half. The longer the half-life, the longer the effects last.

Route of Administration (ROA): The manner by which a drug enters the body. This affects how much of the drug is actually absorbed into the bloodstream. Examples include oral, inhaled, intravenous (injected directly into the bloodstream), intramuscular (injected into muscle) and sublingual (under the tongue).

Maximally Medicated

In various doses and combinations – always with an opioid workhorse at the centre of things – these are the primary drugs I used to help control pain while in hospital:

Fentanyl

Fentanyl is the most potent opioid commonly used for pain management in humans. It is 50-100 times stronger than morphine, with doses in the microgram range, and it has a very short half-life, so it needs constant re-dosing. This was my primary painkiller for roughly three months after the accident, and I also used it for a few days after all major operations.

I mainly took fentanyl intravenously with the help of a PCA machine. This allowed me to press a button whenever I needed pain relief, with a minimum of five minutes between doses. I also received a few intramuscular injections when the PCA machine had to be disconnected for me to have scans. I went through thousands of micrograms a day during my peak usage, receiving 80 micrograms with each push, and there was a point where I was using the maximum daily amount the doctors considered safe.

Methadone

Methadone is a very strong opioid that is 2.5-5 times more potent than morphine. Its strength and long half-life makes it useful in preventing heroin withdrawals, but it is also commonly used as a long-lasting analgesic to manage chronic pain. In the first quarter of 2013, once I stopped using fentanyl, methadone became the backbone of my pain management regime.

I took methadone orally, and my highest daily dose was 50mg, with 25mg taken morning and night. At the end of 2013, when I returned home from inpatient rehabilitation, I took two 10mg doses, and by the second quarter of 2016, when I finally had my hip replaced, it was 2.5mg in the morning and 5mg at night. I ceased taking methadone in September of 2016, and all up I was on it for around three-and-a-half years.

Oxycodone

Oxycodone is a strong opioid that is 1.5 times more potent than morphine. It is commonly prescribed for moderately severe acute or chronic pain, and for breakthrough pain in chronic pain patients. I started using oxycodone at the same time as methadone, to manage any pain the methadone could not cover. I took it orally in both instant and slow-release forms, and at the peak I was using well over 100mg a day. I might have even used over 200mg on a few occasions.

In hospital I usually took 20mg of instant-release at a time. Mostly this was with a minimum of two hours between doses, but I think there was a time when I could take it hourly. At the end of 2013 I was down to about 50mg a day, and by the second quarter of 2016 it was usually just 2.5mg at lunch. This was with a very restricted lifestyle though, and if I went out I needed an extra 5-40mg to keep things manageable. I ceased taking oxycodone in August of 2016, after about three-and-a-half years on the drug.

Ketamine

Ketamine is known in pop-culture for its use as a horse tranquilliser, but it is also still used in human medicine in certain circumstances. I was given ketamine, I think intramuscularly, in large amounts during the first week or so after coming out of a coma. While it worked well, constantly being on ketamine in an ICU started to tear away at my sanity, and I had it discontinued. I am unsure of the exact dose, but it was interplanetary at times.

I later used smaller amounts of ketamine sublingually for around two months, receiving at the most three 10mg doses ten minutes apart, four times a day. It worked well in this context, and had less psychoactive effects than before, but there were still occasional sinister undertones.

Nitrous Oxide

Popularly known as laughing gas, nitrous oxide is commonly used in dentistry. Although it is very short-lasting, it is still exceptionally useful in some situations. I used nitrous oxide for around two months in combination with ketamine to deal with extreme-but-brief bouts of breakthrough pain. All up I inhaled about 1.5 giant cannisters of the gas.

Paracetamol

Paracetamol was supposedly still useful on top of all the heavier painkillers I took as it has a different mechanism of action. For a long time I took 1000mg four times a day, and by the time of the hip replacement it was 1000mg morning and night. I discontinued daily paracetamol soon after tapering off the methadone.

Pregabalin

Commonly referred to by its brand name Lyrica, pregabalin is used to treat epilepsy, anxiety, and in my case, neuropathic pain. I was gradually weaned up to the maximum daily dosage of 600mg, with a 300mg tablet taken morning and night for four years. I have recently begun attempting to reduce the dosage, and I currently take 175mg in the morning and 300mg at night. I am unsure if I will ever be able to discontinue it completely.

Nortriptyline

Nortriptyline has a long history of human use as a tricyclic antidepressant, but it has also been shown to be effective in treating neuropathic pain. I took 50mg in the evening for about a year after the accident, but I was eventually able to discontinue it. After quite a while without taking any my nerve pain started to bother me more at night, so I went back on 25mg. When I began my final taper off of methadone I upped the dose to 50mg to help with sleep, and remain on that amount for now.

Profusely Pained

Neuropathic, or nerve pain, is quite different to normal pain, and something I have to endure in my right leg due to some nerve endings being uprooted. At its worst, in the early days in hospital, it was like my leg was being repeatedly struck by lightning, and there was one particularly unsavoury night in the ICU full of nightmarish electroshock-torture fever-dreams. Fortunately, my nerve pain is now generally well managed by the medication, and while it is always there in the background if I focus on it – making working on this paragraph a nuisance – most of the time it is not too bothersome. I do get the occasional jolt, and there are periods where it flares up and demands more attention (often after heavy leg exercise), but usually I am not distracted by it. It is similar to a pins-and-needles sensation but with more electricity to it. Confused muted nerves now devoid of all purpose sending searching signals out into darkness.

The primary way they monitor your pain in hospital is by constantly asking you to rate it on a scale of zero to ten, with zero being no pain and ten being the worst possible pain imaginable. This becomes a boring game quite quickly, and they use the term ‘pain management’ for a reason; a score of zero was inconceivable for a very long time. For anyone dealing with severe pain issues, it is not a matter of being doped up into a happy bliss all the time, but about preventing pain to the greatest degree possible without the side-effects becoming too bothersome. It can be a fine line between effective analgesia and respiratory failure, and you do not know constipation until you have been bedridden on the highest safe daily dose of fentanyl.

Most of the time in the first few months the medication kept my pain at a five or six. The onslaught of drugs used to keep it this low had a wealth of side-effects, although I was put on so many different things at once that it is hard to say what was a result of what, and also what was just the standard after effects of nearly dying. It was basically like having a multi-month hangover with no reprieve that went far beyond anything alcohol could cause. It was impossible to focus on anything as complex as reading for more than a few minutes without the throbbing headache becoming too debilitating. Then on top of that was the actual pain from my injuries, and often just as bad was the discomfort of being catastrophically constipated.

Since fentanyl was my primary painkiller, due to its short half-life, I had to constantly press the button on the PCA machine to keep the levels in my system high enough to keep the pain at bay. It was impossible to sleep more than an hour at a time without waking in agony and having to spam the button in hope of escaping into another short period of restless sleep. Five hours a night was the upper limit of what was possible, but most of the time it was more like two or three. In the ICU I once went three consecutive days without sleeping, culminating in a half-awake dream state that was very unsettling. An average 2am would find me lying there, trying to remain as still as possible, futilely focusing on my breath with a mantra of “endure, endure, endure, endure...” echoing through my mind. There were five albums on my MP3 player that were soothing enough not to make my headache worse, and with them on a constant loop I was at least able to find some small solace during the long sleepless nights.

As you might expect, I was constantly miserable, but for the most part the medications had an overall dulling effect on my emotions as well as my pain. When I asked how my cat was doing and found out he had died while I was in a coma I had no reaction stronger than thinking “of course he did”. There were not many moments of extreme anguish. Apart from a few times, when worse-than-usual bouts of breakthrough pain managed to tear through the enveloping apathy and let the total despair of my situation flow out unabated, it was just an inescapable dull misery.

These breakthrough moments usually occurred during one of the few times a day when four nurses would move me to prevent pressure sores forming (they still did, in the end). When this happened my pain would shoot up to a seven or eight. It is an exponential scale, and I must also add that I have a good imagination. This was searing, uncontrollable, jaw-clenching, all-encompassing, take-me-out-back-and-shoot-me pain, and I am glad the worst of it only lasted a few seconds. I think a nine or ten would have been largely unattainable. I reserved that rating for the few flashes of pain I remembered from before sinking into a coma, which were so far removed from regular human experience as to be impossible to accurately recall. (The accident itself was not painful in any traditional sense of the word, just... weird and intense.)

There was a good reason for these high ratings too. Throughout the first few months in hospital, no one was aware that my left hip was dislocated, and appropriate care was not taken when moving me to accommodate that. They were still very cautious, most of the time, but their care was directed to the right side of my pelvis where the severest known trauma was. The pain in my left hip did not actually become distinct from all the other pain I was experiencing until a couple of weeks after the accident, when it got noticeably worse over the course of a few days, and was then equally excruciating each time I was moved. I am not sure if the hip was dislocated during the accident and missed by the doctors (who were understandably preoccupied with more life-threatening issues), or if it became dislocated at some other point in time.

Unaware of the dislocation, the immediate reaction of the pain doctors when I complained about this new development was that it was simply referred pain from the right side of my pelvis. I was sceptical about this at first, but after repeated questioning being met with the same answer, I figured they must know best, and just did my best to tolerate it. My entire left leg would involuntarily seize up every time I was moved in a reactive attempt to minimise pain. Eventually, this resulted in uncontrollable spasms taking over the leg, which required diazepam and lots of concentration to subdue. At the same time this was happening, 1.5 litres of an unidentifiable fluid had accumulated in my leg, so it provided an amusing water-bed ripple-effect for the nurses.

After some experimentation, the APS team managed to come up with a combination that made even these short bursts of pain bearable. Every time I was to be moved, I would first load up on three doses of sublingual ketamine, ten minutes apart, then inhale as much nitrous oxide as I could fill my lungs with and exhale myself out into the room’s ambient air for thirty seconds while the nurses moved my body. The effects of nitrous oxide are very short-lived, but by the time it wore off the worst of it was over, and I was able to drift back to my body with my psyche largely unmolested by the shattering jolts of pain I had still vaguely experienced.

The reason I was able to adopt such magical powers is that ketamine and nitrous oxide are both dissociative anaesthetics. They do not dull pain like opioids and most other painkillers do, but instead put a degree of distance between your conscious experience and your body. You are still aware that your body and the pain exist, but you are not your pain. It is a marvellous thing, and I must admit to using a larger amount of the nitrous oxide than would have been strictly necessary by rigid medical standards. However, the mental benefits of actually being able to not just dull but fully escape my pain for a few thirty second periods of the day were immense, and fortunately I have a good poker face, so apart from a few nurses expressing incredulity at the amount I was using, no one had a problem with my bodily excursions.

Using the nitrous oxide like this was actually free of any negative side-effects, and it proved to be a bit of a dark horse in the painkiller department. A common misconception is that regular use of nitrous oxide causes brain damage, but that is not the case. The problem lies in the lack of oxygen your brain gets if you breathe in nothing but pure nitrous for too long, as is sometimes done in recreational settings by people who have not been taught better thanks to the use of scare tactics in place of drug education. The nitrous oxide used in medicine is delivered as a fifty-fifty mix with oxygen, so this was a non-issue. As long as care is taken with a patient’s vitamin B-12 levels (I received a weekly injection), it is generally a very safe drug.

At Last, Stability

After 2-3 months, my pain finally started to settle down, and I was slowly weaned off of the fentanyl, ketamine, and – much to my disappointment – the nitrous oxide. These were replaced with 25mg of methadone twice-daily and oxycodone as needed (regularly). Soon my pain scores actually started to drop for the first time. Initially it was just the occasional period of four, often still higher, but eventually it reached a point where I could stay at two or three for extended amounts of time. This was paradise compared to before, and it led to a period of around a month where I slept for 12-16 hours a day in an attempt to repay the extreme debt I had incurred.

This was also when I reached my weakest. I had not been able to eat properly due to the nausea and constipation, and I could hardly be bothered trying now that I could so easily give in to the methadone's embrace and drift off into serene slumber out of reach of all life's worries. It took the horrifying realisation that I had nearly lost 30kg combined with the threat of being put on a feeding tube to finally find any motivation, but with the help of a lot of laxatives, I eventually got my digestive system moving regularly, and started to put on weight.

I was able to start reducing the dose of methadone, and between that and actually eating, I finally had the energy to start devoting my immense spare time to reading instead of lying motionless feeling miserable. I even managed to discontinue the methadone for a short time and get by with only oxycodone, but once I started to actually get out of bed and move about I had to go back on it. (Or was it the other way around? I was using a minimal amount of opioids for a brief period, anyway.) Seventy books later, by the time I arrived at rehabilitation hospital in the last quarter of 2013, I was taking 10mg of methadone twice a day, and somewhere around 50mg of oxycodone, most of it in the afternoon and evening. While nothing compared to what I was on earlier, this was still a very significant dose, and there were plenty of unpleasant side-effects.

Pain had stopped being such a big issue while I was lying in bed all day, but it became more of a problem again once I was active and working towards rehabilitation. During the day sitting in a chair (this was a workout in itself at the time), and especially while exercising, my pain was still quite severe – usually between three and five. It was nothing like it was in the months after the accident, but still strong enough to be distracting and a constant drain on my faculties. Reducing my opioid intake was out of the question, and I left for home at the end of 2013 with my dosage the same as when I arrived.

Part Two: Management

During the first six months of 2014, after returning home from inpatient rehabilitation, my pain medication remained unchanged. Just getting through a day where I was completely inactive involved intense discomfort, and I was pouring most of my energy into physiotherapy, so decreasing my intake of methadone and oxycodone was the last thing on my mind. Improved fitness had led to a mild reduction of pain in some parts of my body, but it had not yet had a significant impact, and my hip was still a throbbing beacon that was impossible to ignore.

Greener Pastures

I had done plenty of reading about pain medication while I was in hospital, and come across lots of interesting research and anecdotes about cannabis and its wondrous analgesic properties. Of particular note was a study¹ that had shown it to be very effective when paired with opioids, allowing patients to manage on a significantly lower dose of the opioids than they would have otherwise. I had tried cannabis before and knew I was not bothered by its side-effects, so it was my plan from as soon as I arrived home to eventually try using it to lessen my reliance on the harder, legal drugs I was taking. It took a while before I had the energy to actually acquire some, but after about six months at home I started using it daily to complement my other medication. I used a small portable vaporiser, which made it easy to be consistent with the dose, and allowed me to use a conservative amount multiple times a day without wasting any.

Before this point, any reduction in the opioids I was taking was unthinkable. Rehabilitation left me physically and mentally exhausted come late afternoon, even on the days I hardly did anything. To actually feel remotely human I had to basically spend two days in bed recuperating, but that was too much of an interruption to do very often, so most of my time was spent worn out and in lots of pain. My evenings were spent constantly monitoring my pain scores, internally debating whether I could justify popping more pills, or if the need to minimise consumption outweighed the minor difference taking more would actually make given my tolerance. It was impossible to find enjoyment in anything, and I would just distract myself as best I could until it was late enough to go to bed for some reprieve. Cannabis changed all of this very quickly.

Over a couple of months, I was able to reduce my morning and evening doses of methadone from 10mg to 5mg, and my oxycodone intake went from being 45mg of slow-release at lunch plus 10-20mg of instant-release later in the day, to usually only one 5mg instant-release tablet at lunch. In the afternoon and evening, when my pain was most severe, I used cannabis in place of oxycodone, and this worked extremely well for my needs. Since I still had to deal with the strong pain of walking with a dislocated hip, and the general aches that came from the rest of my body, I decided it would be counterproductive to try and decrease the opioids further at this time. I knew I would definitely have to use them for a while after future surgery, so it seemed sensible to just maintain a minimal dose.

Even without cutting the opioids out completely, the improvement in my quality of life was profound. My workouts suddenly stopped seeming like such a chore. I actually had traces of a libido again. The dulling shroud of apathy that surrounded my daily existence began to relinquish its hold, and pain stopped taking such a huge toll on my mental reserves. It became possible to find contentment from the small things in life again, and I would experience unexpected feelings of happiness at random moments of the day. While the improvements in libido and apathy can definitely be attributed to the reduction in opioids, the other benefits occurred as soon as I started using cannabis for pain management, and were largely a result of its psychoactive effects, which play a central role in making it such a powerful tool for coping with pain.

Cannabis does help to dull pain to some extent, but it has much more in common with the ketamine and nitrous oxide I used as an inpatient than it does with opioids. The relief it provides is directly tied to its psychoactivity, and cannot be separated. Among other things, cannabis is a mild dissociative, which is part of what produces the ‘high’ feeling it is known for, and, just like inhaling large amounts of nitrous oxide

¹<https://www.ncbi.nlm.nih.gov/pubmed/22880540>

was an appropriate way to escape from the boundless breakthrough pain of my first few months in hospital, inhaling small amounts of cannabis makes it much easier to decouple oneself from constant chronic pain.

While it is nowhere near as intense in its effects as a true dissociative anaesthetic, cannabis provides a similar sort of relief in a way that is mild enough to integrate into daily life. I am sure it would be unwise to try and work out on ketamine, but by having a small amount of cannabis before exercising, I was able to get into a nice distracted state where I could zone out from the constant ache of my hip, and focus on the movements I was doing and the music I had playing. Before I had my hip replaced, when active, if I stopped and thought about it, I might still have rated my pain as being four out of ten. (Keep in mind that a four for me probably constitutes substantially more pain than a four for someone who has not been run over by a truck.) With the dissociative effects of cannabis at a four too, however, I had far more interesting concerns.

It is impossible to overstate how much easier it is to deal with chronic pain when you are able to spend most of the day in this mildly dissociated state. The pain is still there, somewhere, but it is so much easier to tune out and ignore. One thing the average person might not realise is how mentally draining it can be to spend all day tolerating pain signals. Sure, the pain sucks, but that becomes normal after a while, and what is often more of a nuisance is how completely sapped of will to exist you are by the end of the day. Maintaining a steady rehabilitation routine in these circumstances can be very difficult to say the least. Without the forceful encouragement of an inpatient setting, it can be hard to string more than a few days together before the burnout becomes too much. By freeing the mind from its obsessive focus on pain, cannabis helps an incredible amount in preventing and mitigating this burnout.

The period when I first managed to stick to a consistent routine for any extended amount of time was very soon after beginning to use cannabis for pain management, and I attribute a great deal of my success since then to the mental benefits it provides as a part of its function as pain relief. A comfortable recliner chair and good home theatre setup were also important parts of the equation, but with them in place it was finally possible to escape my pain enough to actually relax and unwind for a few hours in the evening. It was like I had been gifted a mental reset button, allowing me to expunge the purchase pain had gained on my psyche throughout the course of the day, and start with a clean slate the following morning.

The analgesic effects of cannabis were of course very helpful in getting through my daily routine, but just as big an asset was being able to look forward to the evening with the knowledge that no matter how terrible I currently felt, after dinner I would be able to collapse into my chair, use a slightly larger amount of cannabis than I did during the day, and within ten minutes my head would be in the clouds with all recent tribulation but a distant memory. It was actually possible to feel pretty damn good for a few hours, all things considered, and my once futile attempts at distraction became an exquisite elated escape. I could completely lose myself in music or television, drift undisturbed through the evening hours, then arrive at bedtime relaxed and refreshed instead of dully dreading the next day.

This easily-accessible state of euphoria is an incredibly powerful positive force for a pain patient to have at their fingertips, especially when contrasted against the effects a long-term opioid user receives from their medication. For someone who has spent an extended period on extreme amounts of opioids and developed a tolerance, using a responsible amount of oxycodone is a very underwhelming experience. You put off taking more as long as possible, and when you finally pull the trigger there is a half-hour wait for it to begin to kick in. Once it finally does, there will be a mild dulling effect at best, and often your pain has increased by then anyway so it hardly makes a difference. Compare this to the creeping contentment that begins to envelop your body just minutes after inhaling cannabis, and is in full force by fifteen, then it is no surprise that I was able to make such a significant cutback in my opioid consumption. As with other medication, repeated use at a consistent dose leads to the side-effects becoming less pronounced, but some level of mood elevation has always remained, which has been a much needed ally in the time since the accident.

In Australia's current political climate, with cannabis finally being acknowledged for some of its medicinal effects, I think what I have alluded to so far is an extremely important point to reiterate. In the context of chronic pain, any attempts to separate the recreational and medicinal aspects of cannabis will only rob it of a great deal of its utility. I have read that cannabidiol (CBD) can work well for neuropathic pain, but the dissociative relief I have received from cannabis is a result of the THC-rich blend of cannabinoids found in the buds of the plant, which is exactly what makes it appealing to recreational users. (This is not in any way

a valid argument against raw medicinal cannabis. Nearly every painkiller I have been prescribed can get you high – some to a much greater extent.)

While it is certainly worth exploring the various cannabinoids further, and in other areas such as epilepsy it seems like isolating them will provide more effective treatments, for chronic pain the buds of the plant work extremely well, and should be made available to patients immediately. A comprehensive review of the current scientific literature on the health effects of cannabis was recently completed in the USA by the National Academies of Sciences, Engineering, and Medicine². They concluded “there is substantial evidence that cannabis is an effective treatment for chronic pain in adults” (p. 89). Do we really need to waste years and millions of dollars discovering this for ourselves? Cannabis has far less potential for dependence³ than opioids, and none of the overdose risk. The power it has to help mitigate the global oxycodone epidemic⁴ is immense. Any attempts to convince otherwise are at best misguided by outdated science or antiquated morals, and at worst a cold-hearted conspiracy led by powerful pharmaceutical companies eager to hold on to the money they stand to lose if an effective natural painkiller goes to market.

When speaking with a doctor at the pain clinic recently I was told, unsurprisingly, that it is quite common for the people they deal with to use cannabis. It seems unjust laws are not the strongest deterrent when following them leads to inescapable pain. Surely it would be better to provide a regulated environment that encourages responsible usage patterns, and stop forcing suffering citizens into black market dealings where bikie-grown buds of questionable quality abound. A system similar to what California has been pioneering since the 90s needs to be implemented with haste. Patients should be able to go to licensed dispensaries, select from a variety of strains of high quality raw cannabis and cannabis extracts, then experiment with them under professional guidance to find out what works best. Allowing patients to grow their own would also make perfect sense, and doing so could greatly reduce the strain on government coffers currently brought about by subsidised synthetics.

Less Pain, More Gains

After managing to cut back so significantly on the opioids, my medication regime remained mostly unchanged from the last half of 2014 until the second quarter of 2016, when I finally had my hip replaced. I settled into a consistent routine using cannabis, and the amount I consume has remained similar from then until today. Although I have used it multiple times a day for most of the last two-and-a-half years, the overall amount I use is quite small by most standards. Depending on my level of activity, I will usually use my vaporiser on 2-5 occasions throughout the day, taking 1-2 hits each time. Depending on the strain and quality of product, with this level of usage half an ounce (14 grams) will last me 4-6 months. I took a few 1-2 week breaks from cannabis throughout this time when having rare extended rests from working out, and this was not difficult to do at all, which could not be said about trying to do the same thing with opioids.

As the months turned into years and surgery remained just around the corner, my pain improved a great deal, and this was mainly thanks to the improvements in my body that resulted from working hard at rehabilitation. The fact I was so used to the pain probably played some part, but stretching and strengthening the muscles around my hip did a great deal to reduce its severity, and eventually I had largely eliminated the other aches that plagued my body. Overall, I would rate improved fitness as having just as big an impact in reducing pain as the hip replacement itself, if not bigger, and without using cannabis I never would have achieved what I did.

The first six months at home were hellish. When I think back and compare it to my quality of life now there is no other way to describe it, although at the time I was comparing it to a year in hospital, so it did not seem as bad. I was extremely motivated by the desire to walk unaided again, so I still managed to make significant progress, but it was unsustainable. If I had not been able to find such strong solace in cannabis when I did then I doubt I could have kept it up much longer. Maybe in another six months, with surgery still an intangible promise, I would have been so discouraged that I gave up and just rode things out from

²<https://www.nap.edu/catalog/24625/the-health-effects-of-cannabis-and-cannabinoids-the-current-state>

³https://commons.wikimedia.org/wiki/File%3ADrug_danger_and_dependence.svg

⁴<http://www.latimes.com/projects/oxycotin-part1/>

my recliner chair. I am glad that did not happen, and although cannabis itself has not caused a long term reduction in pain, the improvements it enabled most certainly have.

With the betterment of my body, I did eventually manage to cut my morning methadone and lunchtime oxycodone to just 2.5mg of each sometime in 2015, and I remained on that amount until the hip replacement. There was always strong pain when I walked or spent extended periods sitting up, but by the last half of 2015, I had reached a point where I could tune out from pain fairly successfully while relaxing in my recliner chair, even without the distracting power of cannabis.

After the hip replacement, I was planning to increase my cannabis intake to see if I could avoid using extra opioids, but the pain ended up being a lot more severe than I anticipated. In the end I decided it would be better not to risk ruining the good thing I had going by increasing my tolerance, and I just used the same amount of cannabis and additional opioids while necessary. Cannabis was able to distract me from the elevated pain scores during the day, but pain significantly impacted my ability to sleep. Fortunately I still had some 30mg slow-release oxycodone tablets lying about, as the medication I was discharged with would have been insufficient on its own. I took them for a few weeks in the evening, as well as some 10mg instant-release throughout the night if required, then gradually reduced my dose, and by six weeks post-surgery I was back to my previous level of medication.

I began to work extremely hard at physiotherapy at this point, so it was a while before I felt game to make any further cutbacks, but in August of 2016 I stopped taking oxycodone and noticed no difference. A couple of weeks after that I began to chip away at the methadone. My 2.5mg morning dose went without any trouble too, with cannabis nicely masking any negative effects during the day. I waited another week, and then I halved the 5mg evening dose. This was the first time I noticed any significant difference, and although the pain was no worse, my sleep was substantially impacted for a few nights. It slowly returned to normal over the next two weeks, after which I decided to be done with it and stopped the methadone completely in September 2016.

Once again my pain remained unchanged, but without any methadone in my system sleep was even harder to come by than two weeks prior. The first week was a real struggle because of this, and cannabis made getting through the day a lot easier than it would have otherwise been. Coffee helped too, and I spent extra time on the exercise bike to help wear myself out. After a week my sleep started to stabilise, and after two weeks I was able to get seven hours most of the time, which has been the case since then. This is less sleep than I could manage while using opioids, but with the help of an extra cup of coffee I am generally more energetic throughout the day than I was before. There was not as dramatic an improvement from being opioid free as there was when I made the substantial cutback two years earlier, but as well as the extra energy I felt a bit less numb and slightly more libidinous. I suppose that is not surprising since I was on a fairly minimal dose when I began my final taper. I was also very burnt-out from pouring all my energy into rehabilitation, which probably had some influence.

If not for cannabis, I have no doubt that I would still be using opioids at this point in time. It is quite possible I would have never felt capable of reducing my dose before the hip replacement without it, and being on 20mg of methadone and 50mg of oxycodone a day for two more years would have made tapering far more challenging than it was. Take into account the reduction in pain through fitness that cannabis enabled, and I think it is fair enough to say that I would have remained on opioids for at least another year or two. It is possible I would have felt unable to face tapering at all until I had stopped focusing on rehabilitation, and I might have even ended up another lifelong user like so many similar patients out there today.

I have not noticed any significant long-term side-effects from using cannabis to manage my pain. While there are definitely some short-term downsides, such as mildly impaired concentration and memory, they do not have any significant impact on my life in its current form, and are most noticeable in the hour after consuming. When I took breaks I always enjoyed the novelty of a clearer mind, but I never felt like I was doing harm by not being in that state more often. I was always back to normal a few days after stopping. I have completed the bulk of this account under the influence of cannabis, and, in the right amount, the added creativity it provides can in fact be quite useful for tasks like writing.

As things currently stand, I think daily cannabis use will continue to be the best way forward while I am still

working full time at rehabilitation. Although my pain has improved a great deal in the last six months, and I am now almost never conscious of hip-specific pain, I am not pain free, and cannabis will no doubt allow me to direct all my focus towards exercising without being distracted by discomfort. It seems likely that back pain resulting from my pelvic misalignment will be the main concern in the future, but with further strengthening efforts I hope I will be able to minimise its frequency and severity.

Nerve pain will also continue to be an issue, and I am unsure if I will ever be able to completely come off the medication I use to manage it. I have recently been able to reduce my morning dose of Lyrica from 300mg to 175mg, but initial experiments indicate that reducing the evening dose will prove difficult. I tried taking 225mg in the evening on my GP's recommendation, but I gave up after two nights as the lack of sleep was impacting my workout routine. I will try a more conservative taper next time to see if that helps. It will be nice if I can discontinue it, but I have been on the highest allowed dosage for a long time, and there are lots of accounts online from people struggling to come off far less. That being said, my nerve pain is largely unchanged since I did reduce the morning dose, so I think I will at least be able to make further cutbacks. I have had one flare-up since then, and that was the worst it has been in a long time, but apart from that the subjective difference has been negligible. Maybe it will even be possible to go for periods without taking any medication, and have something on hand for when it does get bad.

Cannabis does seem to have at least some effect on nerve pain, but how much it helps on top of my other medication is hard to gauge. The times nerve pain is most bothersome is often while in bed, when I do not have any cannabis in my system, but it does get bad occasionally when under the influence, so that could be a coincidence. Cannabis certainly helps to distract attention from nerve pain in the same way it does for regular pain, and continuing to use it will no doubt make life more pleasant while I experiment with reducing my doses of Lyrica and nortriptyline. If it is possible to acquire a strain that is high in CBD in the future, it will be interesting to see if that helps.

Regardless of pain, I think it will be worth continuing to use cannabis for now if for nothing other than the burnout mitigation it has so reliably provided me. With my body, working out for twenty-five hours a week has a similar mental effect to being in lots of pain by the end of the day, and I think using cannabis will be the only way to continue to do so for extended periods whilst retaining a shred of sanity. Doing endless isolation exercises would probably get pretty boring without sensory-enhanced music to enjoy, too.

I think eventually, once I stop expending all my energy on rehabilitation, it will be fairly easy to cease using cannabis daily. At the very least I hope to restrict use to the evening most of the time, but less than that should be possible. I am sure my life will always be a balancing act between being active and minimising pain, and it is hard to imagine ever reaching a point where having access to cannabis will not significantly improve my quality of life. Ideally I will take a few months break, but after that I think a sporadic usage pattern will be warranted. It is possible occasional opioid use might even allow me to be more active in the future. I plan to go at least a year without taking any, but after all this I consider myself quite capable of using them responsibly if doing so proves beneficial. It will be very nice if I never have to, though, and I think with access to cannabis, there is a good chance of that being the case.