



THE OPIOID CRISIS FOR ATHLETES:

**A CASE FOR CHIROPRACTIC
DISRUPTING THE CYCLE OF
PAIN, PRESCRIPTIONS AND
ADDICTION**

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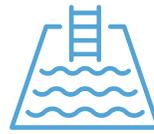


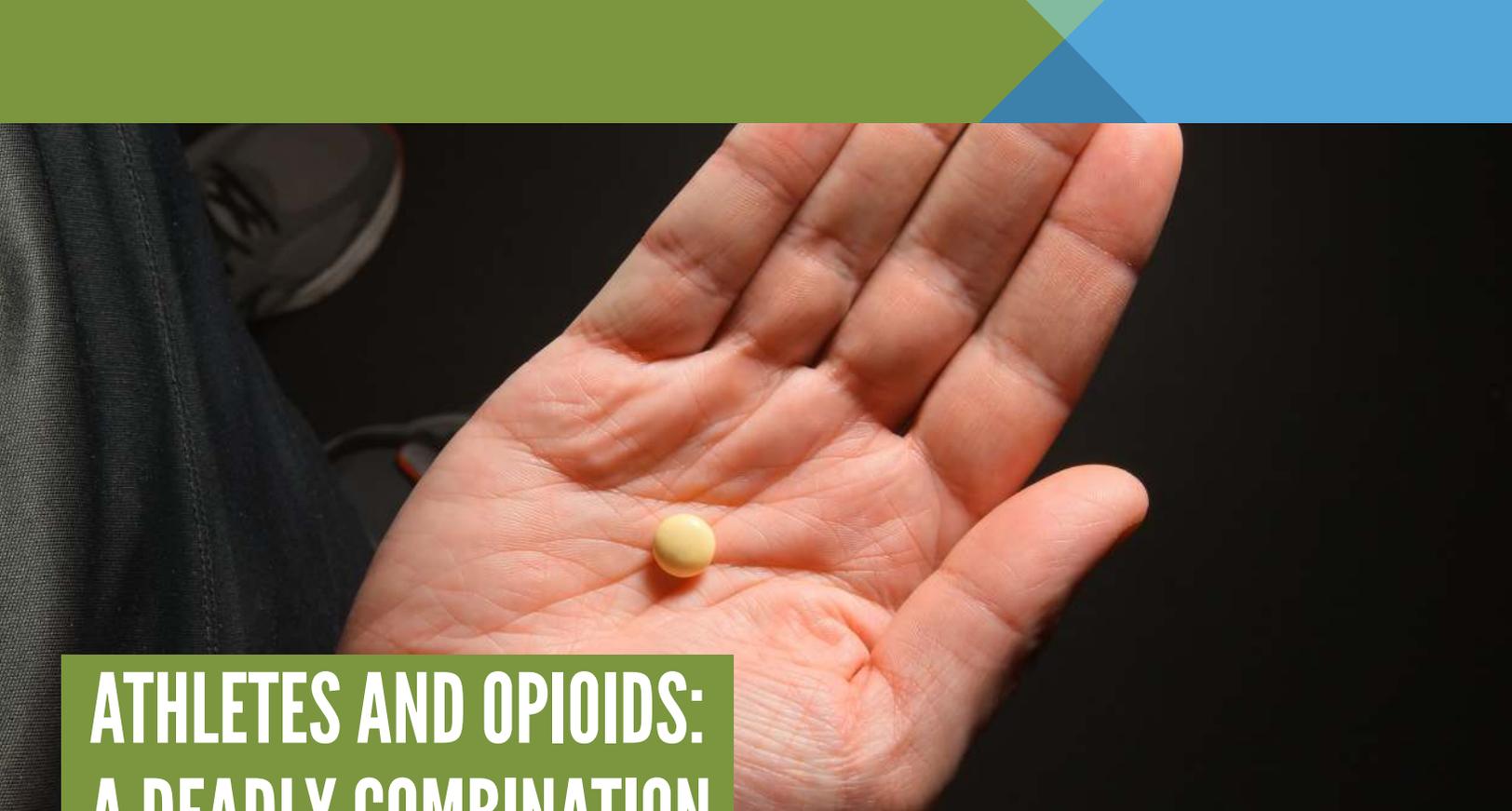
INTRODUCTION

No matter what the sport, athletes suffer injuries.

This can happen in a second, such as a high ankle sprain during a football tackle, or gradually, such as a rotator cuff irritation in golf, baseball, tennis or other sports. Regardless of the cause, athletes pursue numerous treatments to prevent injury, reduce pain and improve their range of motion including rest, ice, chiropractic care, physical therapy, and, unfortunately, opioids and other medications. With the latter, this can lead to a vicious cycle of aggravating the injury and then consuming more opioids repeatedly until the athlete is permanently injured and/or addicted to the medication.

This paper offers an overview of opioid misuse among athletes and how the pressure to perform can cycle to drug addiction quickly and as early on as high school. We will also explore how chiropractic care can prevent this pattern by helping athletes prevent injuries and perform at their best without the risks associated with opioids.





ATHLETES AND OPIOIDS: A DEADLY COMBINATION

In 2017, an estimated 11.4 million people misused opioids in the past year, including 214,000 adolescents aged 12 to 17 and another 634,000 young adults aged 18 to 25.¹ Opioids often offer rapid pain relief, which means athletes can return to play sooner, even if the injury has not safely healed.

This sets up a cycle of aggravating the injury, obtaining more opioids, continuing to compete and eventually leading to further abuse, loss of control and addiction. This cycle of addiction is created by changes produced in brain chemistry from substance abuse, according to Lakeview Health, an addiction rehabilitation organization in Texas and Florida.² The cycle is perpetuated by physiological, psychological and emotional dependency and typically continues unrestrained until some type of intervention occurs.

Preceding the addiction cycle is often the pain cycle. In this cycle, physical pain leads to avoidance behaviors and decreased mobility, which can cause emotional responses such as altered functional status, diminished self-efficacy and social limitations.³ The emotional aspect contributes to even greater physical pain and the cycle starts over. To avoid both the physical and emotional pain, athletes can become dependent on opioids.

Athletes typically first obtain prescription pain medication legally from their physicians. As misuse or dependence grows, athletes may begin to consume much higher than their prescribed dosage. Unable to refill their prescription as quickly as desired can potentially lead to athletes obtaining the painkillers in other ways, such as "doctor-shopping." Professional hockey player Derek Boogaard, for example, obtained at least 25 opioid prescriptions from 10 different physicians during one season.⁴ Boogaard died in 2011 at age 28 from an accidental overdose of opioids and alcohol.

Preventing an addiction cycle like Boogaard's must begin with detecting the warning signs of misuse early, which is described later, and pursuing safe, effective drug-free care, such as chiropractic. With at least seven years of advanced training in the neuro-musculoskeletal system, doctors of chiropractic (DCs) are skilled and experienced in treating existing injuries, primarily of the back, neck and joints, as well as headaches. Consistent chiropractic care can also help prevent injuries and improve athletic performance, which is part of the reason why all National Football League (NFL) teams, most professional sports teams and U.S. Olympians have DCs as part of their multidisciplinary training and medical staff.⁵

A photograph of an ice hockey player in red and white gear, holding a red and blue hockey stick on an ice rink. In the background, a goalie in red and green is visible in front of a goal.

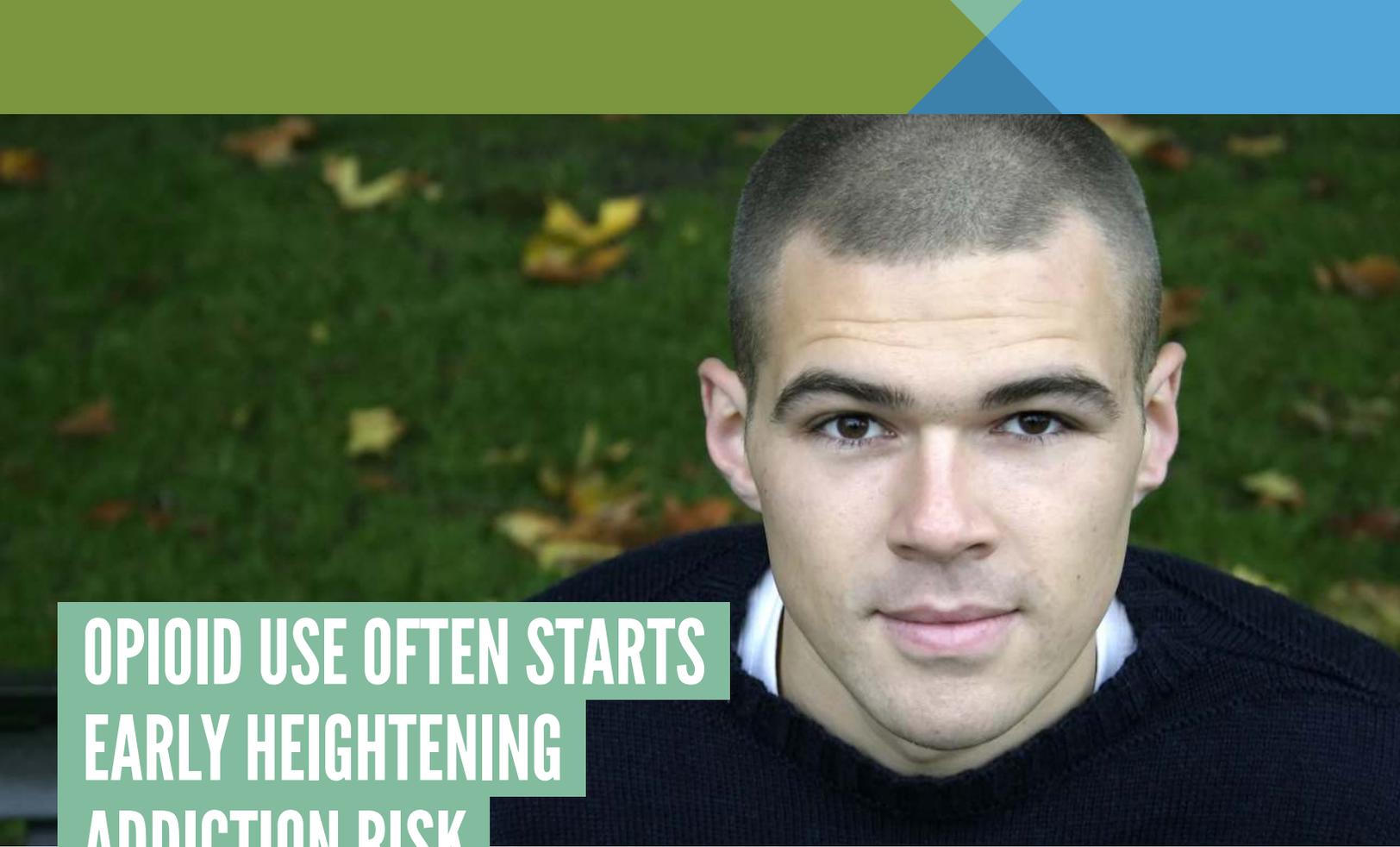
OPIOID AND OTC PAIN MEDICATION USE COMMON AMONG ATHLETES

Numerous studies have examined whether being a student athlete protects or encourages non-medical use of prescription opioids (NUPO). One study found that NUPO was common among high school ice hockey players, wrestlers and weightlifters,⁶ while additional research found that students who engage in contact sports report higher opioid use due to increased severe injury.⁷ Another analysis found that risk of NUPO was more common only among male athletes.⁸

One factor that is certain is that opioid prescriptions are increasing in these age groups. A 2010 study estimated that prescriptions for adolescents ages 15 to 19 as well as young adults ages 20 to 29 nearly doubled between 1994 and 2007.⁹ Back pain was the top reason given for the prescription for both adolescents and young adults.

What is unclear from the research is whether these young athletes pursued other treatment methods before, or in addition to, receiving the opioid prescription. As we will explore in the next section, the pressure to compete can be enormous, which may influence athletes to seek and maintain opioid use to mask pain instead of pursuing the longer lasting process of healing the injury.





OPIOID USE OFTEN STARTS EARLY HEIGHTENING ADDICTION RISK

Even in high school, athletes feel obligated to coaches, teammates and the student body to compete, particularly if they are a top performer in their sport. This may induce athletes into wanting to return to play when an injury has not fully healed and seek opioids to eliminate their pain during and between competition. Simultaneously, athletes are also less likely to report opioid use or misuse due to consequences from these same people.¹⁰

The cycle of misusing opioids and aggravating injuries leading to more opioid abuse can continue throughout the athletes' collegiate and professional playing career. After their playing days are over, however, dependence on pain medication remains, even when the injury has healed. For example, 52 percent of retired NFL players said they used prescription pain medication during their career. Of those, 71 percent said they misused those drugs, while 15 percent of those players admitted to still misusing opioids.¹¹

Another study published in 2018 of retired NFL players who were prescribed pain medication found that 26 percent had reported opioid use within the last 30 days and 12 percent reported misuse.¹² NFL players have found that the cycle of addiction does not end when their competitive days are over; rather, it may get worse. Former lineman Aaron Gibson, for example, took as many as 70-80 painkillers a day as a retired player before he was able to stop three years ago.¹³ His story and those of other players were featured in a *New York Times* article describing how their addiction to opioids can be traced to their playing days when the medication was easily obtained from the team physicians.

When opioids cannot be obtained legally, an addiction disorder prompts the athlete to spend greater time and effort to acquire the drugs. For example, athletes often turn to fellow players while others may seek drug dealers. Former National Basketball Association (NBA) player Chris Herren, who battled addiction in high school and college, was one such professional athlete who turned to dealers. In fact, he waited outside the arena just before his first game with the Boston Celtics for his dealer to obtain opioids.¹⁴ After several overdoses and personal turmoil, Herren finally broke the addiction cycle and entered a substance abuse treatment program. Herren has not used opioids for more than a decade.



IDENTIFYING MISUSE AND ABUSE OF PAIN MEDICATION

NBA player, Chris Herren, who since ending his struggle with opioid addiction, has launched a Foundation to help others afford substance abuse treatment and now tours the country sharing his story. A key message in his talk is prevention. "Prevention starts with 'all,' not just home," he says. "It starts with all of us."¹⁵ Preventing opioid misuse needs to include parents, coaches, physicians, athletic trainers and other healthcare professionals.

Watching for signs and symptoms of misuse is an important prevention step. Those indicators may include:

- increased sensitivity to pain,
- nausea or vomiting,
- dry mouth,
- constipation,
- dizziness or sleepiness,
- confusion,
- depression,
- or low levels of energy and strength.¹⁶

The rehabilitation facility Lakeview Health also highlights several behaviors of athletes and others with addiction disorders who may be caught in an addiction cycle. They include:

- mood swings;
- exhibit strong, primitive defense mechanisms (denial, rationalization, minimization, projection, justification, blaming);
- unreliability;
- dishonesty and lying to family, friends and coaches;
- isolating and withdrawing from loved ones; and
- difficulty with interpersonal relationships.¹⁷

Parents, athletic trainers, healthcare providers and others with more uninterrupted one-on-one time with the athlete often have a better perspective on signs and symptoms. If detected, an intervention needs to occur, which may involve medical detoxification, counseling and/or substance abuse treatment, among other steps depending on the athlete's age, degree of misuse and unique circumstances.¹⁸



PREVENTING OPIOID MISUSE THROUGH NON-PHARMACOLOGICAL THERAPIES

Preventing opioid misuse, however, can begin before a prescription is even written. Opioids should be avoided when necessary, not only due to the risk of misuse and addiction, but rather because the medication is often ineffective, especially for chronic pain. A recent meta-analysis published in *The Journal of the American Medical Association (JAMA)*, which included 96 randomized clinical trials, concluded opioids produced only small improvements for chronic noncancer pain and physical functioning and that nonopioid alternatives may be equally as effective.¹⁹

Chiropractic care, however, is a drug-free care option to manage acute, subacute and chronic pain. The Institute of Medicine has recommended the use of non-pharmacological therapies, including chiropractic care, prior to utilization of opioids for patients with chronic pain.²⁰ A 2018 study published in *The Lancet* points out the latest U.S., United Kingdom and Danish clinical guidelines for treating low back pain endorse spinal manipulation for acute and chronic low back pain.²¹ Similarly, recently published guidelines from the American College of Physicians recommend non-pharmacologic treatment as the first-line approach to treating back pain, with consideration of opioids only as the last treatment option, or if other options present substantial harm to the patient.²²

Many collegiate and professional athletes consider chiropractic care a first-line option for any injury involving the neuro-musculoskeletal system, which is why doctors of chiropractic (DCs) are often included on multidisciplinary sports medicine and training teams. In fact, the textbook, *Conservative Management of Sports Injuries* concludes: "...treatment of athletes with low back pain requires a plan to return them to play in a safe and effective manner. Chiropractic care, in conjunction with the sports medicine team, plays a valuable role in functional treatment of spinal pain in sports."²³

A study published in *The Journal of Alternative and Complementary Medicine* concludes that adults receiving chiropractic care for low back pain were 55 percent less likely to fill a prescription for an opioid analgesic in comparison to adults who did not receive chiropractic care.²⁴ The object of the investigation was to evaluate the association between utilization of chiropractic services and the use of prescription opioid medications. Based on the findings, pain management services provided by DCs may allow patients to use lower or less frequent doses of opioids, leading to reduced costs and risk of adverse effects.

Furthermore, researchers in the Department of Sports Science and Clinical Biomechanics at the University of Southern Denmark found that "patient education, supervised exercise and spinal manual therapy" were the best guidelines for recent onset (less than 12 weeks) low back pain and lumbar radiculopathy.²⁵ Conversely, the guidelines recommend avoiding spinal injections, over-the-counter pain relievers and opioids.

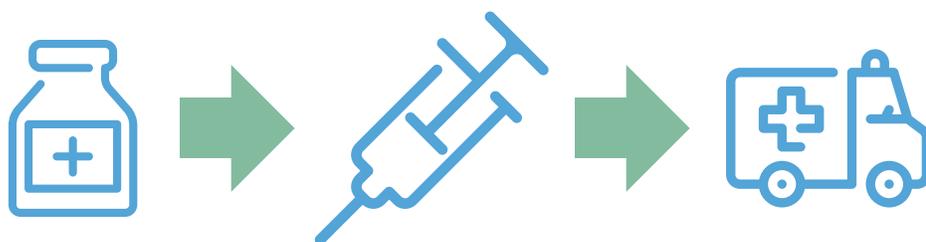
In addition to treating injuries, chiropractic care has been shown to increase strength, improve reaction time and heighten athletic performance by increasing and optimizing range of motion, balance and correcting improper technique.²⁶



FENTANYL OVERTAKING PRESCRIPTIONS AS ABUSE DANGER

A glimmer of hope in the nation's opioid crisis is there appears to be a reduction in some types of misuse. For example, hydrocodone (Vicodin) use decreased by 51 percent in eighth graders, 67 percent in tenth graders and 74 percent in twelfth graders between 2010 and 2017. Likewise, 35.8 percent of surveyed twelfth graders said opioids were easily available in a 2017 survey, compared to more than 54 percent in 2010.²⁷

However, while prescription opioid misuse may have waned due to tighter prescription control and public awareness, the number of Americans using heroin has more than doubled in the past 15 years, to nearly one million in 2016, including 13,000 12- to 17-year-olds.²⁸ At the same time, Fentanyl, a newer higher potency synthetic opioid, accounted for nearly half of opioid-related deaths in 2016,²⁹ surpassing prescription medication. This trend could simply be another demonstration of the addiction cycle in action. When prescription opioids become less effective or more difficult to obtain, athletes and others with addiction disorders may seek heroin, which is often less expensive and easier to purchase.





CONCLUSION

The strategy for preventing athletes from transitioning from prescription medication to these more lethal opioids is the same as any opioid: early prevention and intervention. Along with observation and listening, chiropractic care is an ideal form of prevention because it helps athletes return from injury to their sport faster and perform better without the pain medication that can start them on the addiction cycle. In many cases, chiropractic care can relieve athletes from seeking opioids in the first place – and never using at all is the best form of prevention.



About Foundation for Chiropractic Progress

A not-for-profit organization, the Foundation for Chiropractic Progress (F4CP) informs and educates the general public about the value of chiropractic care. Visit www.f4cp.org or call 866-901-F4CP (3427) to learn more.

Doctors of Chiropractic Tackle Injuries for NFL Players

Doctors of chiropractic (DCs) help professional athletes to prevent, manage and care for injuries, as well as achieve peak performance, including players on all NFL teams. Here’s what the team DCs have to say about how chiropractic care helps keep players in this high impact sport on the field:

“Super Bowl LIII was the lowest scoring Super Bowl in history. Our defense led to our victory by limiting our opposition to a field goal. Chiropractic enhanced the performance of our players by allowing them to play at maximum efficiency and play through the postseason with no injuries. Chiropractic is the best defense!”

– Michael Miller, DC,
New England Patriots team chiropractor since 1982

“During the six seasons I’ve spent with the Atlanta Falcons, my goal has always been to prepare each player’s body to better resist trauma and to speed its natural recovery time. I firmly believe that regular chiropractic care has played an important role in helping us stay healthy and get to Super Bowl LI – I am proud of the role I’ve played in their success.”

– Joseph Krzemien, DC, team chiropractor,
Atlanta Falcons

“Ensuring that the joints are functioning properly is critical in the healing process, as well as for injury prevention and optimal performance. The players recognize that chiropractic care helps them to perform better and heal faster, ultimately leading to better team success.”

– Michael Zoelle, DC, team chiropractor,
Green Bay Packers

FOOTNOTES

1. Key Substance Use and Mental Health Indicators in the United States: Results from the 2017 National Survey on Drug Use and Health. <https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHFFR2017/NSDUHFFR2017.htm>
2. "Explaining the Cycle of Addiction." Recovery Connection. <https://www.recoveryconnection.com/cycle-addiction/>
3. The Endocannabinoid System, Cannabinoids, and Pain. https://www.researchgate.net/publication/258524619_The_Endocannabinoid_System_Cannabinoids_and_Pain
4. In Hockey Enforcer's Descent, a Flood of Prescription Drugs. <https://www.nytimes.com/2012/06/04/sports/hockey/in-hockey-enforcers-descent-a-flood-of-prescription-drugs.html>
5. "Chiropractic: A Safe and Cost-Effective Approach to Health." https://www.f4cp.org/wp-content/uploads/2018/02/chiropractic_a_safe_and_effective_approach_to_health-1.pdf
6. "Nonmedical Use of Prescription Opioids and Heroin Use Among Adolescents Involved in Competitive Sports." [https://www.jahonline.org/article/S1054-139X\(16\)30370-6/fulltext#intraref0010a](https://www.jahonline.org/article/S1054-139X(16)30370-6/fulltext#intraref0010a)
7. "Participation in sports reduces teen risk of nonmedical use of prescription opioids and heroin." <https://onlinelibrary.wiley.com/doi/pdf/10.1002/cbl.30152>
8. Sports involvement, injury history, and non-medical use of prescription opioids among college students: An analysis with a national sample. <https://www.ncbi.nlm.nih.gov/pubmed/29280290>
9. "Prescribing of controlled medications to adolescents and young adults in the United States." <https://www.ncbi.nlm.nih.gov/pubmed/21115581>
10. "Nonmedical Prescription Drug Use Among College Students: A Comparison Between Athletes and Nonathletes." https://www.researchgate.net/publication/23275026_Nonmedical_Prescription_Drug_Use_Among_College_Students_A_Comparison_Between_Athletes_and_Nonathletes
11. "Painkiller Misuse Numbs NFL Pain." <http://www.espn.com/espn/eticket/story?page=110128/PainkillersNews>
12. "Reasons for Prescription Opioid Use While Playing in the National Football League as Risk Factors for Current Use and Misuse Among Former Players." <https://www.ncbi.nlm.nih.gov/pubmed/29933284>
13. The Hungriest Man on Earth." <https://bleacherreport.com/articles/2723920-aaron-gibson-nfl-weight-loss-interview>
14. "Chris Herren visits North Jersey to tell story of addiction that ended his NBA career." <https://www.northjersey.com/story/news/morris/lincoln-park/2018/10/23/chris-herren-nj-tell-addiction-story-ended-his-nba-career/1675361002/>
15. Prevention Starts with "All." <https://theherrenproject.org/prevention-starts-with-all/>
16. Prescription opioids: Side effects. Retrieved from <https://www.cdc.gov/drugoverdose/opioids/prescribed.htm>
17. Explaining the Cycle of Addiction." Recovery Connection. <https://www.recoveryconnection.com/cycle-addiction/>
18. Guide to Addiction and Treatment for Athletes. <https://americanaddictioncenters.org/athletes>
19. Opioids for Chronic Noncancer Pain: A Systematic Review and Meta-analysis. <https://jamanetwork.com/journals/jama/article-abstract/2718795>
20. Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research <https://www.nap.edu/read/13172/chapter/1>
21. "Prevention and treatment of low back pain: evidence, challenges, and promising directions." [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(18\)30489-6/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)30489-6/fulltext)
22. "American College of Physicians issues guideline for treating nonradicular low back pain." <https://www.acponline.org/acp-newsroom/american-college-of-physicians-issues-guideline-for-treating-nonradicular-low-back-pain>
23. Conservative Management of Sports Injuries. https://books.google.com/books/about/Conservative_Management_of_Sports_Injuries.html?id=uzPwfNYjjUC
24. "Association Between Utilization of Chiropractic Services for Treatment of Low-Back Pain and Use of Prescription Opioids" <https://www.liebertpub.com/doi/pdf/10.1089/acm.2017.0131>
25. "National Clinical Guidelines for non-surgical treatment of patients with recent onset low back pain or lumbar radiculopathy." <http://europepmc.org/abstract/MED/28429142>
26. "Chiropractic: A Safe and Cost-Effective Approach to Health." https://www.f4cp.org/wp-content/uploads/2018/02/chiropractic_a_safe_and_effective_approach_to_health-1.pdf
27. Monitoring the Future Survey: High School and Youth Trends. <https://www.drugabuse.gov/publications/drugfacts/monitoring-future-survey-high-school-youth-trends>
28. Opioid Facts for Teens. <https://www.drugabuse.gov/publications/opioid-facts-teens/opioids-heroin>
29. "Nearly half of opioid-related overdose deaths involve fentanyl." <https://www.drugabuse.gov/news-events/news-releases/2018/05/nearly-half-opioid-related-overdose-deaths-involve-fentanyl>



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