Expert Views

Is Underwriting a Professional Basketball Player a Slam Dunk?

Extreme Sports

An Underwriting series

SCOR

The Art & Science of Risk

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Contents

Executive Summary

Basketball is the third most popular sport in the world, attracting 2.2 billion fans not only in the US, its country of origin, but also in other countries. In China, for example, basketball is the No.1 most popular sport. It also attracts millions of fans and participants in Canada, Japan, Australia, Argentina, Germany, Spain, Lithuania, Serbia, and others.

Basketball has a relatively short history - just over 100 years, but it became popular thanks to its unique qualities – the fast pace of games, dramatic plays, and athletes' prowess of the court that fascinate many people. Elite basketball athletes are hailed as superstars in their home countries and worldwide, enjoying remarkable career success. But people often forget that those superstars also face hidden risks each day. Behind their glamorous life on and off the court, they are under significant health and life risks, facing high costs as a result of injury, diseases, mental health, and other issues, often without sufficient insurance coverage.

This report will focus on health and life risks associated with professional basketball players. Through our analysis, we provide underwriters and insurance professionals with a deeper understanding of how complex and increasing risks should be considered during the insurance application process. In addition, we feature two mock underwriting case studies from different markets to give readers a glimpse of how SCOR's Life & Health underwriters assess cases. We conclude by highlighting factors to consider in underwriting high-profile professional basketball players.

Author's introduction - Thomas Bornemann

I grew up in a village near Göttingen in Lower Saxony, Germany, where most children played football, the German national sport. Basketball at that time was not popular in my country. I was a tall boy, reaching 1.8 m (nearly 6 ft) by age 12, actively involved in athletics, especially the long jump, high jump, and sprint disciplines. Everyone around me said I should try basketball, so I started playing at age 16. There was no basketball court at my school, so we had to create our own basketball hoops and court. Soon I fell in love with this sport and decided to pursue a career as a professional.

In the mid-1980s, Göttingen was a basketball hotspot in Germany. I joined ASC Göttingen youth team at the age of 17. With my 2.02 m (6' 6") height and good jumping ability, I moved up relatively quickly from the junior team to a center position in the second-division team. Later, I trained with the ASC Göttingen Bundesliga (first national division) team, the three-time German champion in those years and had the chance to play in the national league four times.

However, when I was 25, the club faced financial issues and some players, including me, left voluntarily. I moved to the second Bundesliga team of BG 74 Göttingen, which was a better fit for me. I then moved one more time to TK Hannover in 1991 -- also in the second division of the Bundesliga.

Basketball had steadily increased in popularity during these years, especially after Germany won the European Basketball Championship in 1993. It was a memorable day for me, not only because of our national team's victory, but also it was the day my daughter was born.

At 26, I started reducing my basketball playing because of family responsibilities and my second job in the insurance business which I started. At that time in Germany, nobody could make a living by playing basketball.

Looking back, I see that there were no adequate considerations for professional athletes' health and injury risks when I was in the Bundesliga. The only sports medical examination I took then was a lactate test. Luckily, I had no serious injuries during my professional career, but I'll never forget the bang I heard when another player tore his Achilles tendon. Even though I had no health issues during my basketball years, I started to rethink this when a team member got cancer in his early 30s.

I think we have made great progress today, thanks to refined examination techniques and extensive sports medicine examinations. Professional athletes are more frequently diagnosed with pre-existing diseases or abnormalities and have access to close health monitoring by medical professionals such as cardiologists and sports medicine experts. As a former semi-professional athlete and a medical underwriter, I have great interest in the advancement of medical research on this topic and take pride in providing those athletes the proper life and health insurance protection they need and deserve.

I am happy to share my knowledge and experience with my fellow industry colleagues. I hope this will give you a glimpse of professional basketball players' lives, the risks they face every day on and off the court, and the protection we as an industry can provide.

Thomas Bornemann
Head of Underwriting
SCOR Life & Health Germany

Author's introduction - Ed Sheehan

When I was first asked to contribute to an article about the challenges of underwriting professional basketball players, I struggled with the topic. We generally take the same approach to underwriting professional basketball players as we do for all professional athletes. However, when I gave it more thought and reflection, I became excited about the topic. I now believe that professional basketball players can present some unique challenges to a life insurance underwriter.

I grew up in Massachusetts and have always been an avid supporter of all the local professional sports, including basketball. When I was a teen in the 1980s, Boston Celtics, who won three NBA championships, were easy to love and support. They had the second overall pick in the 1986 draft and selected Len Bias, viewed by many scouts as the best player that year who drew comparisons to Michael Jordan. But then tragedy shut down his bright future. The day after he was drafted, Bias was pronounced dead due to a cardiac arrhythmia related to cocaine use.

The tragedy continued. The very next year, the Celtics drafted Reggie Lewis with the 22nd pick of the first round. He was an all-star in 1992 and the team captain in 1993. Lewis collapsed during a game that year and was initially diagnosed with focal cardiomyopathy but sought a second opinion, resulting in a less serious diagnosis of neurocardiogenic syncope. However, within three months, Lewis suffered sudden cardiac death at the age of 27, with the official cause of death being hypertrophic cardiomyopathy. Rumors of possible cocaine use have swirled in the media and courtroom ever since.

In the decades since these high-profile deaths, the NBA and teams have significantly increased the level of cardiac testing performed on all players entering the league. They have also increased the level of due diligence performed to evaluate a player's maturity level and personal background to seek out any concerning red flags. While some may argue that this is the best that can be done to evaluate a player's maturity level, decision-making skills and character, the true value of these investigations remain unclear. Why do basketball players, especially recent draft selections, present unique underwriting challenges as compared to other professional sports? I suggest the following four key factors from my observations.

1) Younger draft age and insufficient consideration of their physical and cognitive maturity
The human brain, specifically the frontal lobe, does not mature until around 23-25 years of age. This is the part of the brain that helps us with decision-making and the ability to make rational decisions whilst balancing consequences and risk against reward. Emotions tend to win out over thoughtful logic when faced with decisions. The average age of first-round draft picks in the NBA during the past three years is 19.6, while that in the NFL draft is nearly 22. In the NHL and MLB, top draft picks typically spend several years playing in the team's own developmental minor leagues before making the top-tier professional levels and more substantial salaries, giving rookies time to mature under the watchful eyes of coaches and trainers without the instant stardom and related wealth.

2) Less reliance on teammates and coaches
I would postulate that basketball is a sport where it is possible to develop essential skill sets on your own and outside of a team environment. There are far fewer positions on a basketball team compared to football. Football is a more team-oriented sport that offers players the ability to switch positions once drafted into the NFL, making it easier for teams to pass on a player with any red flags.

3) Insufficient financial management education

The lucrative pay and associated lifestyle portrayed by some top NBA players sometimes cause them to overlook the importance of sustaining their financial health, which would eventually affect their physical and mental health. Contrary to public perceptions, statistics show that 60% of NBA players struggle financially after retirement.[1] This is not because they do not earn enough income. On the contrary, many teams pay astronomical salaries to their players. The problem is that they often lack financial literacy and mismanage their money, not taking into account the heavy tax burden and how much they need to save post-retirement.

4) Intense game and traveling schedule

The NBA arguably has the most intense scheduling in professional sports. Players compete in 82 regular games per season plus 30 additional playoff games. In peak weeks, they have to play as many as eight games in different cities across the nation over a twelve-day period. One team had to travel more than 50,000 miles during the season and play three games in a four-day stretch 25 consecutive times.[2] This intense schedule adds to a huge mental and physical burden to players.

Overall, when considering the factors that young professional athletes face once drafted, it's clear professional basketball players may encounter a more complex set of circumstances than their peers in other sport leagues. I hope this article will give you new perspectives and a deeper understanding of this beloved sport.

Ed Sheehan
AVP, Underwriting Quality Assurance
SCOR Life & Health US

Introduction to Basketball

Basketball is a well-loved sport, captivating 2.2 billion enthusiastic fans and named the third most popular sport globally.[3] It is the only indoor sport whose popularity matches other sports, such as football (soccer), baseball, or rugby. Why is basketball so popular? It could be its remarkable speed, players' ultra-human athleticism, or the human drama it represents. Those elite basketballers look and act like superhuman, but are they really?

In this report, SCOR's underwriting experts talk about health and life risks associated with basketball players, mostly elite professionals, providing a deeper understanding of how complex and increasing risks should be considered during their insurance application process. The analysis also features two fictitious underwriting cases from different markets to give readers a glimpse of how SCOR's professional underwriters assess cases. While this article does not offer in-depth medical or scientific advice on underwriting-specific cases, we aim to provide readers with essential knowledge and points to consider when underwriting applicants who engage in this exciting sport.

Case 1:

Felix, a 29-year-old basketball player, 200 cm (6.7 ft),101 kg (223 pounds), married with two kids, non-smoker, plays as a power forward in the German first division. He applied for a term Life insurance policy with €1 million in face amount and a disability income cover with a monthly annuity of €3.000.

He was diagnosed with type 1 diabetes at age 12. He now wears an insulin pump and a continuous glucose monitor (CGM) and feels confident taking insulin in public. Felix publicly says that nutrition, stress, and excitement are three of the biggest elements of managing type 1 diabetes and that he has learned to be conscious of as an athlete. His current medical status shows HbA1c between 6.5% and 7.0% with no complications, and his exercise ECG is inconspicuous.

How would you underwrite Felix's case?

Case 2:

John, age 22, 2.0 m (6'6 ft) and 98 kg (215 pounds), is a rising NBA basketball star. During his college years, he played at a preeminent Division I team that made it to the NCAA Final Four in his sophomore year. After that, John made the decision to go pro and declared himself eligible for the draft at age 19. Despite many predictions, he fell to the middle of the second round and was picked by a team located in one of the US's largest cities. In his first season, he played tremendously over the first two months but has more recently been struggling to live up to the level of performance expected, resulting in criticism from the fans.

He applied for $5,000,000 of life insurance coverage during the second half of his first NBA season. On the insurance exam, he admits to taking a prescription medication for sleeping issues. His motor vehicle report reveals two speeding tickets, with one conviction and no other details. Team physical health records note that he had a history of a tibia stress fracture three years ago and a family history of depression. The records confirm that he recently mentioned having trouble sleeping after games and irritability and was given a prescription. There is a mention of social alcohol use, and his criminal record search was clear.

Life as a professional athlete may look glamorous on the surface – wealth, fandom, celebrity, and travel. However, once you look deeper as we did with John's situation, one may better recognize the adversity some face coming to age in the limelight, in circumstances few can fully comprehend.

How would you underwrite John's case?

Overview of Basketball

History of Basketball

Basketball has a clear single origin. It was invented in 1891 at a college gymnasium in Springfield, Massachusetts, by a 31-year-old graduate Canadian-American student named James Naismith, a prior physical education instructor at the YMCA International Training School, later named Springfield College.[4] The original purpose was to give their school athletes fun and engaging indoor physical activities during the long and cold winter months, but the athletes loved this newly invented sport so much that they decided to play it year-round.

The name "basketball" came from the fact that they originally used fruit baskets as the goals. Soon, those basket goals evolved into the current style – a metal hoop with nets so that they don't need to take the ball out of the basket each time they score.

Since its inception, the popularity of basketball has grown throughout the US. In 1899, the University of Kansas hosted the first college varsity game.[5]

In 1930, basketball was officially recognized by the International Oympic Committee (IOC), and the International Basketball Federation (FIBA) was born. It became an official Olympic sport at the Summer Games in Berlin in 1936. In the US, the National Basketball Association (NBA) was founded in 1946. Basketball's popularity kept growing around the globe. In China, for example, the sport was introduced as early as in the 1890s, and it gained popularity quickly, supported by the Chinese army and several star players. Today, basketball is the most popular sport in China, with about 625 million fans.[6] Today, NBA rosters feature a record 125 international players from 40 countries and territories.[7]

Key Rules of Basketball

The original 13 rules created by Naismith have evolved into different, more complex, and comprehensive rules today. A basketball team consists of five players on the court during the game. Each player has specific positions and roles, categorized into three major roles - guard, center, and forward. A point guard sets both offensive and defensive strategies. The shooting guard has the best mid- to long-range shooting skills that will bring three pointers (the highest-scoring) chances to the team. Forwards play a key role in scoring with mid- to short-range shooting. The center occupies the space nearest to the hoop to block opponents and pick off rebounds.

The number of points given depends on where the ball was thrown from. The three pointer, the highest, is made from outside the three-point line, two points are scored from within the line, and one point is earned by each free throw. The length of the game ranges from 40 to 48 minutes, but it often lasts much longer due to stoppages, overtime, time-outs, etc.

Basketball Players Profile

Age: The average age of an NBA player is 26 years old. Their average career length is short – only 4.5 years. Those superstar players who have been on the front line for many years, such as LeBron James (21 seasons) and Kobe Bryant (20 seasons), are rare. Many other players retire early due to injury, underperformance, or other reasons. NBA players' average salaries are the highest among all the major US professional leagues.[8] This only relates to the top few and, therefore, many players face difficulties planning and securing their physical, mental, and financial health after a very early retirement.[9] Statistics show that 60% of NBA players struggle financially after retirement.[10]

Height and weight: The latest (2022-2023) stats show that the average height for NBA players is 6.0 feet to 6.7 feet (203.4 cm), and average weight is 217.62 lbs (98.7kg). This is much taller/heavier than other popular professional sports such as FIFA World Cup soccer/football players (6.0 feet / 182.4 cm and 170 lbs / 77.2 kg)[11] and MLB baseball players (6.1 feet / 207.3 lbs).[12]

More importantly, there is a noticeable trend that NBA players have become taller and heavier in recent years. Compared to the 1950s, the average height of the players grew from 6'3 feet to 6'7 feet in the 2010s. Average weight has grown more significantly, from 175 lbs in the 1950s to nearly 220 lbs in the 2010s.[13]

Furthermore, Charts 1 and 2 show the changes in height and weight distribution of NBA players between 1948 and 2013. The degree of shift is larger in weight than height, suggesting that a significantly greater amount of weight is added to today's basketball players, potentially leading to elevated health concerns.

Chart 1: NBA players height distribution (1948 – 2013) Source: Tothemean

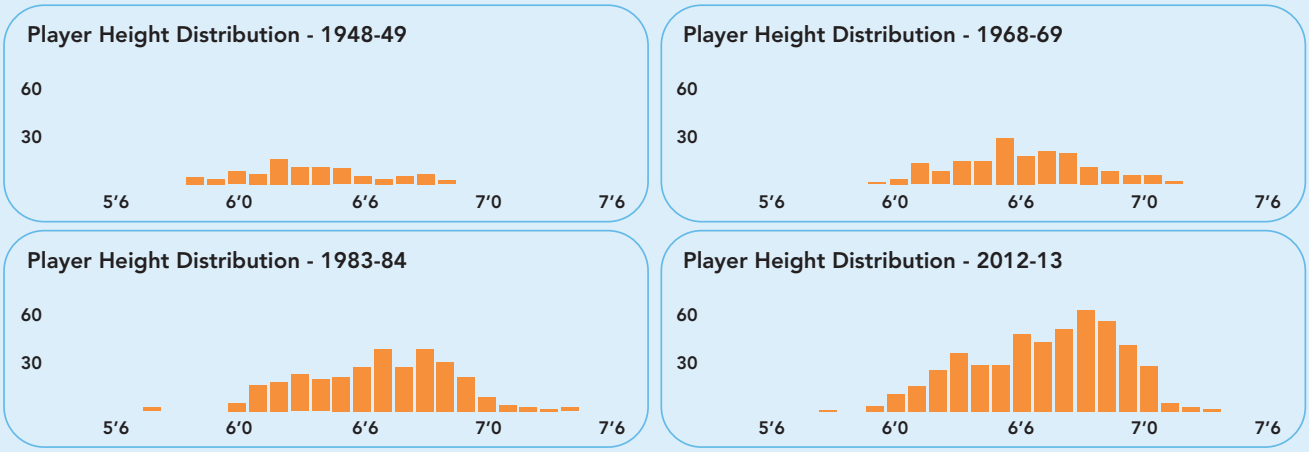
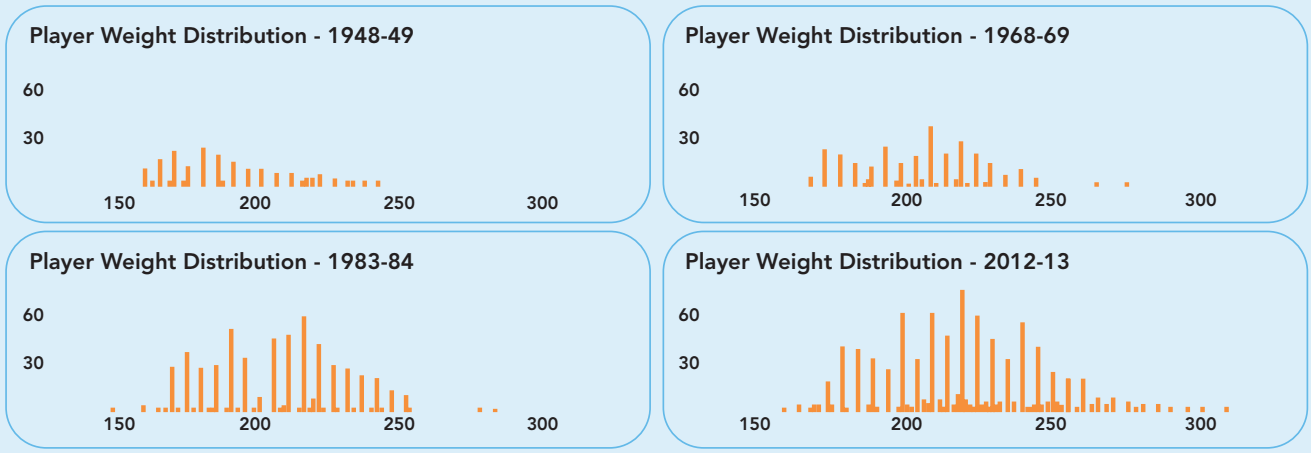


Chart 2: NBA players weight distribution (1948 – 2013) Source: Tothemean



Types of Life and Health Insurance Coverage for Basketball Players

According to NBA rules, every team is required to insure the contracts of their top five most valuable players (MVPs), mostly in the form of disability insurance, but not others. This means that most players have to buy their own insurance. Because of the unique health risks NBA players are exposed to, they generally have to seek out a specialty insurance provider such as through a broker and a special insurance providers.

Players with high injury rates may be declined by insurers. Insurance companies underwriting an NBA team's players typically have the right to name 14 specific player exclusions each season. One example is New York Knick's Amar'e Stoudemire, who could not get his knees covered for insurance in 2010. He had to seek coverage elsewhere and pay the difference.[14] In Hong Kong, members of the professional basketball team reported substantial medical and surgery expenses they faced during their international matches, which were not covered by the team or their local basketball association.[15]

Concerns about the increasing health and injury risks among professional basketball players are rising, and authorities are aware of it. In 2020, the NBA has increased insurance policy coverage for players to $2.5 million for career-ending injuries. The policy covers on-and-off-court injuries, including complications from COVID-19. This was a significant increase from previous years.[16]

Information on professional players' life and health insurance coverage is not widely available and terms depend on each case. The latest case of ex-NBA player Michael Kidd-Gilchrist shows that he filed a $40 million lawsuit against Lloyd's for not paying his claims for $10 million should he be unable to "continue his occupation as a professional basketball career." [17]

Risks Associated with Basketball

"Pain was my motivation" – Michael Jordan

How do the mortality and morbidity of NBA players differ from the general population and other professional athletes? Although evidence shows that elite athletes have better health and a higher life expectancy than the general population, there are certain risks associated with their profession. Below are highlights of major health and mortality risks associated with professional or intensive basketball playing.

Injuries

Although basketball was created by James Naismith as a less injury-prone sport than football in 1891, the physical size of the players has become much larger and heavier, thus exposing players to a higher injury risk than 130 years ago.

Studies find that NBA athletes experience a high rate of injuries. Data from 1988 through 2005 show that 19.1 per 1000 athletes reported injuries. Chart 3 shows that injury rates get slightly higher for heavier (over 132kg/291 pounds) or taller players.[18] The most frequently injured body part is the lower extremity (62% of total injuries), especially ankles, as shown in Chart 4.

Chart 3: Injury rate by players demographics Source: Injury in the National Basketball Association - PMC (nih.gov)

Table 1: Injury rate by body area Source: Injury in the National Basketball Association - PMC (nih.gov)

	All Injuries (n, 12 594)				Game-Related Injuries (n, 6287)				
	Total		Games Missed		Total		Game Related		
Body Area	n	%	n	%	n	%	%	Rate	95% CI*
Lower extremity	7853	62.4	42 802	72.3	3636	57.8	46.3	11.1	10.7-11.4
Upper extremity	1945	15.4	7212	12.2	1213	19.3	62.4	3.7	3.5-3.9
Torso	1600	12.7	7647	12.9	652	10.4	40.8	2.0	1.8-2.1
Head	951	7.6	868	1.5	658	10.5	69.2	2.0	1.8-2.2
Cervical spine	198	1.6	590	1.0	116	1.8	58.6	0.4	0.3-0.4
Systemic	38	0.3	32	0.1	7	0.1	18.4	0.0	0.0-0.0
Genitals	9	0.1	28	0.0	5	0.1	55.6	0.0	0.0-0.0
Total	12,594	100.0	59,179	100.0	6,287	100.0	49.9	19.1	18.7-19.6

**CI, confidence interval.*

The increasing number of games that players are required to play is leading to an increased injury risk, as witnessed during the 2019-2020 season when the pandemic led the NBA to condense the season.[19] Studies found that in women's basketball (WNBA), players sustain more injuries than men.[20] In youth sports, basketball ranked second in the number of injuries age 19 and under, right below football. The knee is the most affected body part, followed by the lower back and pelvis.

Chart 4: NBA Basketball Players Injury by Body Structure Source: Injury in the National Basketball Association - PMC (nih.gov)

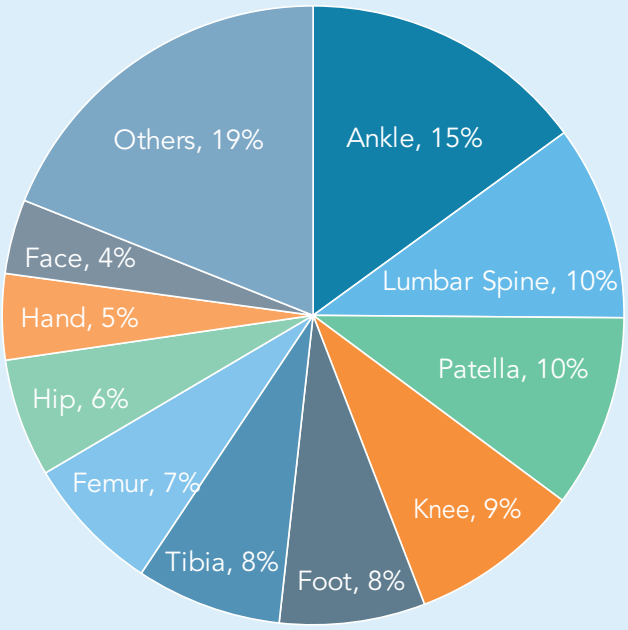


Chart 5: Number of injuries among athletes 19 and under from 10 popular sports Source: Overtraining and Overuse Injuries Causes Burnout in a Young Athlete (samford.edu)

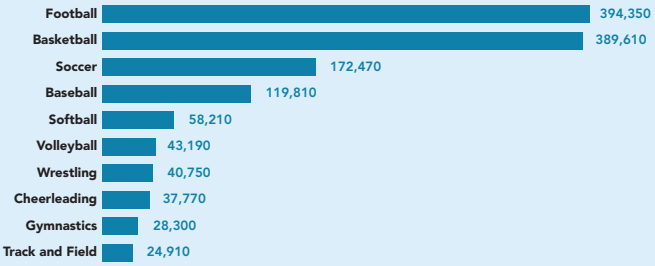
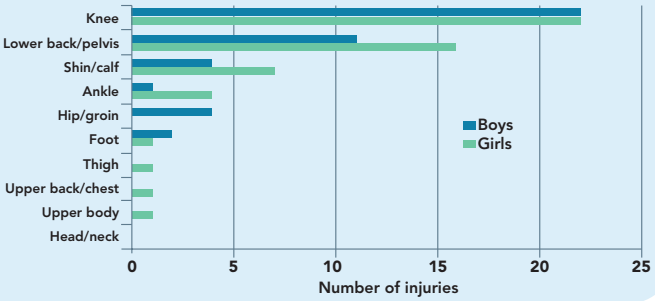


Chart 6: Overuse in injuries in basketball by location and gender Source: Overtraining and Overuse Injuries Causes Burnout in a Young Athlete (samford.edu)



Many injuries will heal with proper care, but studies show that some of them persist throughout the players' lives, even post-retirement, significantly impairing activity levels.[21] Further studies and evidence are needed to identify the risk factors, but life and health insurance underwriters need to be aware of this potential risk when assessing applicants.

Cardiovascular Diseases / Sudden Cardiac Death (SCD)

Professional basketball players have a high exposure to sports-related cardiac arrest. Researchers from Columbia University Medical Center gathered echocardiographic data on NBA players to attempt to delineate the normal changes resulting from intense athletic training of basketball (athlete's heart) from unhealthy and dangerous disease states, such as forms of cardiomyopathy, that would require treatment to mitigate risk. This is no simple task, as there is quite a bit of overlap between athlete's heart and the different cardiomyopathies.[22] A 20-year study of sudden cardiac death among National Collegiate Athletic Association athletes published in 2024 also reveals that although the incidence of sudden cardiac death (SCD) has decreased over this time period, the athletes at higher risk appear to be male and basketball players.[23]

Undiagnosed congenital heart disease could be a cause of risk, as well. One may recall news about the cardiac arrest and subsequent hospitalization of a college basketball player, the son of a famous NBA player, who collapsed during practice.[24] Ongoing research and monitoring are required to determine the appropriate safety measures to mitigate this risk.

Overtraining Syndrome

Overtraining syndrome is a situation caused by excessive training where a player's performance is impaired by an elevated risk of injury and illness. Its many symptoms include chronic fatigue, unusual muscle soreness, increased blood pressure, delays in recovery, depression, mood swings, poor quality sleep, etc. If not properly treated, overtraining syndrome could lead to more serious outcomes such as depression, insomnia, bradycardia, infections, etc.

Professional basketball players are constantly exposed to intense games and training schedules during the season. Although it may not be so visible, fatigue from overtraining could affect the ability of the athletes to perform their best and maintain their health in the long term.

Human Growth Hormones and Other Performance Enhancing Drugs

In 2012, the director general of the World Anti-Doping Agency (WADA) said NBA's anti-doping program was insufficient. NBA has a list of prohibited substances, such as performance-enhancing drugs (PEDs), stimulants, and others, under its anti-drug policy. Human Growth Hormones (HGH), a type of PEDs currently banned by the World Anti-Doping Agency, increase muscle and bone growth. Although it is effective in treating growth hormone deficiency in children and adults, it is sometimes illegally used by athletes to obtain a physical advantage or quicker recovery from injuries.[25] Apart from its illegality as it enhances unfair physical and performance advantages, HGH can also cause serious side effects such as heart disease including high cholesterol and even premature death.[26]

The NBA's struggle with players' drug usage has a long history. In the 1970s and 1980s, NBA had to fight widespread cocaine usage among players. Some retired players still suffer from drug addiction issues. In the early 2000s, the NBA anti-doping policy was still criticized as "soft" and has "gaps", including the lack of transparency, no blood testing, low vulnerability to microdosing, etc.

Sleep Deprivation

Sleep is essential to every human body. While little is known, it is quite possible that many elite basketball players are not getting enough sleep, causing many health issues. Pro-basketball athletes, such as NBA players, have extremely busy

schedules throughout the season. In the NBA, each team plays 82 games, which is on average three games a week. This is much more frequent than other professional sports such as soccer, football, and rugby. The pro-basketball season requires extensive travel across multiple time zones and an intensive schedule, disrupting the quality and patterns of players' sleep. As a result, many NBA players suffer from sleep deprivation, which could cause many health issues, including cardiovascular disease, chronic fatigue syndrome, and others.[27]

Marfan Syndrome

Marfan syndrome is a genetic condition that involves the body's connective tissue. People with this condition often have a particular phenotype (observable characteristics) or body type. That body type is a tall, thin stature, with long arms and legs, as well as flexible joints. As can be imagined, this is a common body type for basketball players.

All individuals with this body type do not necessarily have Marfan syndrome, which is distinguished by a particular genetic mutation of connective tissue. Medical problems caused by Marfan syndrome include heart valve problems and aortic aneurysms. If not properly diagnosed or monitored, basketball players with an aortic aneurysm can face the risk of sudden death during competition or practice. An echo radiography (ECHO) which is part of the routine screening for NBA players, should identify those at risk with an enlarged aorta. Marfan syndrome can be identified or confirmed by genetic testing.[28]

Mental Health

Mental health issues could emerge or worsen after players finish their basketball careers. Professional basketball players often face post-retirement challenges such as loss of identity, difficulties in finding or transitioning to new careers, adjusting their lifestyles, and managing financial resources after the lucrative earnings they had in their professional days has ended.

Furthermore, the physical toll of a basketball career, including chronic fatigue and injuries resulting in disabilities, may also impact their mental health. "Everyone is going through something. Success is not immune to depression," said Kevin Love, Cleveland Cavalier's center-forward who went through panic attacks and mental health issues throughout his career.[29]

In 2018, the National Basketball Players Association (NBPA) launched a mental health and wellness program to provide players with greater access to mental health counselors. The NBA also is also implementing greater emphasis on mental health education in its Rookie Transition Program.

Implications and Recommendations for Underwriting

Case Study 1

Felix, a 29-year-old basketball player, 2.0 m (6.7 ft),101 kg (223 pounds), married with two kids, non-smoker, plays as a power forward in the German first division. He applied for a term Life insurance of €1 million face amount and a disability income cover with a monthly annuity of €3.000.

He was diagnosed with type 1 diabetes at age 12. He now wears an insulin pump and a continuous glucose monitor (CGM) and feels confident taking insulin in public. Felix publicly says that nutrition, stress, and excitement are three of the biggest elements of type 1 diabetes that he has learned to be conscious of as an athlete. His current medical status shows HbA1c between 6.5% and 7.0 % with no complications, and exercise ECG is inconspicuous.

How would you underwrite Felix's case?

Due to the high amount of the proposed sum insured, underwriters require his complete medical evidence such as health declaration and sports medical examination containing laboratory, urinalysis, resting ECG, exercise ECG, and echocardiography. Details of the injuries with consequences are important. His complete laboratory test results, including blood picture count, lipid status, fasting blood sugar, measurement of glycosylated haemoglobin (HbA1c), liver enzymes, and viral serologies, suggested no concerns. The urinalysis also showed no abnormalities. His BMI, systolic and diastolic blood pressure were all within normal range.

His resting ECG showed sinus rhythm, indifference type; here were no pathological ST-changes. The ergometry/stress-echocardiography has been performed with no complaints up to 300 watts. His oxygen saturation, blood pressure, and heart frequency were all normal.

Although HbA1c is the preferred measure of diabetic control, a good compliance factor is also the time in range (TIR) based on continuous glucose monitors (CGM). Time in the range is the amount of time you spend in the target blood glucose (blood sugar) range—between 70 and 180 mg/dL; the target of more than 70% is recommended.

To help further assessment, underwriters can request, if available, the following examinations be done to assess the degree of vascular, renal, nervous system, and eye damage:

- Dilated eye exam of retina
- Optical coherence tomography (OCT)
- Nerve conduction studies
- Carotid artery ultrasonography
- Doppler studies of the lower extremities

Based on the available data, Felix can be rated with a loading (substandard class). Further assessment and evidence by medical doctors are recommended.

Case 2:

John, age 22, 2.0 m (6'6 ft) and 98 kg (215 pounds), is a rising NBA basketball star. During his college years, he played at a preeminent Division I team that made it to the NCAA Final Four in his sophomore year. After that, John made the decision to go pro and declared himself eligible for the draft at age 19. Despite many predictions, he fell to the middle of the second round and was picked by a team located in one of the US's largest cities. In his first season, he played tremendously over the first two months but has more recently been struggling to live up to the level of performance expected, resulting in criticism from the fans.

He applied for $5,000,000 of life insurance coverage during the second half of his first NBA season. On the insurance exam, he admits to taking a prescription medication for sleeping issues. His motor vehicle report reveals two speeding tickets, with one conviction and no other details. Team physical health records note that he had a history of a tibia stress fracture three years ago and a family history of depression. The records confirm that he recently mentioned having trouble sleeping after games and irritability and was given a prescription. There is a mention of social alcohol use, and his criminal record search was clear.

How would you underwrite John's case?

Does this applicant raise any concerns to underwriters? On the surface, no single aspect of his health or lifestyle appears concerning, and he may be approved for life insurance coverage without further case development. But let us dig deeper into his history to see if any red flags exist.

Despite many experts' pre-draft predictions that he would be as high as the 15th overall pick, he ended up the #42 pick. This could be because the team doctors had concerns about his past tibia injury or his history of alcohol usage while still under the legal age limit. An internet search revealed that he had been involved in a physical altercation while he was a college freshman but limited details were found, and no criminal charges were filed. Records showed two speeding tickets, with only one conviction and the second charges still pending. There were a few news reports indicating he was traveling 90+ mph, and social media videos caught his sports car on camera being driven recklessly when exiting his home stadium after games.

His health records also show his recent admission of irritability and sleeping troubles. The medication he was prescribed to aid in sleeping is widely used to treat anxiety and depression. This could indicate that he is currently suffering from high levels of stress or other mental health symptoms, paired with worsening sleep hygiene due to frequent traveling. Underwriters need to pay attention to the possibility that he could be experiencing worsening professional and personal struggles resulting in psychological stressors, poor sleep quality, chronic fatigue, and poorer performance.

Life as a professional athlete may look glamorous on the surface, but once you look deeper, as we did with John's situation, one may better recognize the adversity some face coming to age in the limelight, in the circumstances, few can fully comprehend. It is crucial that underwriters approach each case with diligence and caution. We recommend more information be gathered and analyzed with medical specialists before underwriters make a decision in this type of high-profile case.

UW Insight - China

Basketball is a very popular sport in China with 130 million basketball population. Since the late 1990s, with the introduction of the NBA on TV and some famous basketball players such as Yao Ming and Yi Jianlian, basketball has become a national sport with high commercial impact. The Chinese Basketball Association (CBA) was established in 1995, and the CBA is currently the second most popular commercial sport association right after football (soccer). China now has more than 8,000 registered professional basketball players which means the insurance coverage for these high-risk sport players is a topic to solve by the insurance industry.

In general, the Chinese Life & Health industry uses two types of underwriting approaches. One is full underwriting, which usually has four pages of application form (AF), including health (around 13 questions), financial (approximately four questions), high risk sports questionnaires, etc. The other approach is simplified underwriting, which has one or two pages of AF, including health (approximately five questions) and financial (usually one or two questions) questionnaires according to types of products. But it doesn't have high-risk sports questionnaire.

High risk sports of full underwriting include scuba, boxing, skydiving, bungee jumping, and so on. Basketball does not belong to high-risk sport. It is not mandatory to disclose this hobby of applicants when applying for insurance coverage. In this way, an amateur basketball player does not pose higher risk factors for underwriting.

If applicants are professional basketball players, occupation questions of AF will disclose this specific information to underwriters. Underwriters will think that it is a different risk compared to amateur basketball players. It is very rare in China that professional athletes buy commercial products from life and health insurance companies, whether individual or group businesses. I have been working for 24 years in underwriting and claims including insurance and reinsurance. I have never seen an application from a professional athlete, but we have recently received an inquiry from a major insurer about reinsuring a famous Chinese professional skier. Maybe in the near future, as more and more people are awarded the value of commercial insurance, the insurance applications of professional athletes will become popular in China as well.

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Conclusion

As we have explored throughout this article, elite basketball players face unique morbidity and mortality risks behind their glorious lives on and off-court. They are constantly under intense pressure to perform at their maximum levels while they experience many life and health-threatening events throughout their careers, such as injuries, cardiovascular issues, overtraining syndrome, sleep deprivation, drug use, mental health issues, financial and post-retirement worries, etc. To adequately underwrite professional basketball players, it is recommended that underwriters develop specialized knowledge of their unique risks and remain constantly updated with medical development and industry trends. There is a strong need for to provide adequate insurance coverage to all professional basketball players. To properly assess each athlete's risk, securing strong underwriting capabilities backed by highly specialized and experienced underwriting professionals is critical.

For further information or underwriting guidance, contact your local SCOR underwriting expert.

We invite you to follow this ongoing series as we tour the world of extreme sports, tapping into SCOR's network of expert insurance professionals – and amateur athletes – whose passion and knowledge allow SCOR to break through common misconceptions and offer a better understanding of the true risks surrounding extreme sports for amateurs, professionals, and – occasionally – even spectators.

Endnotes

1. Omuya, K. (2023, April 12). Broke NBA players: Current and former NBA players who are currently broke. SportsBrief.com. https://sportsbrief.com/nba/25012-broke-nba-players-current-nba-players-currently-broke/
2. Esnaashari, F. (2023, August 17). Shocking stats about Clippers schedule revealed. Sports Illustrated LA Clippers News, Analysis and More. https://www.si.com/nba/clippers/news/shocking-stats-about-clippers-schedule-revealed
3. Martinez, N. (2022, November 1). Basketball named 3rd most popular sport in the world with over 2 billion fans worldwide. Fadeaway World. https://fadeawayworld.net/nba-media/basketball-named-3rd-most-popular-sport-in-the-world-with-over-2-billion-fans-worldwide
4. Where Basketball was Invented: The History of Basketball | Springfield College. (n.d.). https://springfield.edu/where-basketball-was-invented-the-birthplace-of-basketball
5. Basketball in Kansas - Kansapedia - Kansas Historical Society. (n.d.). https://www.kshs.org/kansapedia/basketball-in-kansas/12229
6. Wikipedia contributors. (2023, December 31). Basketball in China. Wikipedia. https://en.wikipedia.org/wiki/Basketball_in_China
7. Kienle, K. (2023, October 24). NBA rosters feature record 125 international players from 40 countries and territories - NBA.com: NBA Communications. NBA.com: NBA Communications. https://pr.nba.com/2023-24-nba-international-players/
8. Gaines, C. (2013, October 10). CHART: The average NBA player will make a lot more in his career than the other major sports. Business Insider. https://www.businessinsider.com/chart-the-average-nba-player-will-make-lot-more-in-his-career-than-the-other-major-sports-2013-10
9. Admin. (2010, June 10). Life after NBA comes sooner than many players think. NBA.com. https://www.nba.com/nuggets/features/junior_bridgeman_20100610.html
10. Wealth, C. D. S. W. a. a. D. O. S. a. E. a. B. P. (2018, May 15). Money lessons learned from pro athletes' financial fouls. CNBC. https://www.cnbc.com/2018/05/14/money-lessons-learned-from-pro-athletes-financial-fouls.html#:~:text=Sixty%20percent%20of%20NBA%20players,just%20a%20handful%20of%20years.
11. Anthropometry of the players at the 2018 World Cup. (n.d.). https://www.topendsports.com/sport/soccer/anthropometry-worldcup2018.htm
12. Aaron Judge is a baseball giant, but how does he compare outside MLB? (n.d.). MLB.com. https://www.mlb.com/news/featured/aaron-judge-is-a-baseball-giant-but-how-does-he-compare-outside-mlb
13. How has height changed over time in the NBA? | tothemean. (2014, August 26). https://www.tothemean.com/2014/08/26/height-distributions-in-nba.html#:~:text=The%20average%20height%20starts%20off,height%20rose%20to%206%277
14. PolicyAdvisor Brokerage Inc. (2023, November 30). How do you insure NBA superstars? - PolicyAdvisor. PolicyAdvisor. https://www.policyadvisor.com/magazine/cost-to-insure-nba/
15. Araullo, K. (2023, November 21). Insufficient coverage leave HKBA players with expensive medical costs. Insurance Business Asia. https://www.insurancebusinessmag.com/asia/news/breaking-news/insufficient-coverage-leave-hkba-players-with-expensive-medical-costs-467476.aspx
16. Helin, K. (2020, July 30). Report: NBA raises insurance payout to $2.5 million for career-ending injuries - NBC Sports. NBC Sports. https://www.nbcsports.com/nba/news/report-nba-raises-insurance-payout-to-2-5-million-for-career-ending-injuries
17. The Messenger.com. https://themessenger.com/sports/ex-nba-player-michael-kidd-gilchrist-files-40-million-lawsuit-against-life-insurance-company-after-covid-19-complication

18. Baig, J., MD. (2018, April 27). The NBA May Be Pushing its Tallest Players to the Point of Injury. www.vice.com. https://www.vice.com/en/article/zmgd44/nba-tall-players-injury-basketball
19. Morikawa, L., Tummala, S. V., Brinkman, J. C., Petty, S. a. B., & Chhabra, A. (2022). Effect of a condensed NBA season on injury risk: An analysis of the 2020 season and player safety. Orthopaedic Journal of Sports Medicine, 10(9), 232596712211211. https://doi.org/10.1177/23259671221121116
20. Researchgate.net. Injury Risk in Professional Basketball Players: A Comparison of Women's National Basketball Association and National Basketball Association Athletes (researchgate.net)
21. Chetan, G., Moin, K., Tyrrell, B., Kim, M., Joel, G., Joseph, P. R., & Bedi, A. (2019). Impact of shoulder injuries on quality of life for retired National Basketball Association players: a survey study. International Journal of Sports and Exercise Medicine, 5(12). https://doi.org/10.23937/2469-5718/1510154
22. Engel, David J., Allan Schwartz, and Shunichi Homma. "Athletic cardiac remodeling in US professional basketball players." JAMA cardiology 1.1 (2016): 80-87.
23. Petek, Bradley J., et al. "Sudden cardiac death in National Collegiate Athletic Association athletes: a 20-year study." Circulation 149.2 (2024): 80-90.
24. Tanyos, F. (2023, August 27). Congenital heart defect likely caused Bronny James' cardiac arrest, family says. CBS News. https://www.cbsnews.com/news/bronny-james-congenital-heart-defect-cardiac-arrest-lebron
25. A study might change the way sports thinks about human growth hormone. (2015, December 6). ABC7 Chicago. https://abc7chicago.com/sports/a-study-might-change-the-way-sports-thinks-about-human-growth-hormone/1111713/
26. Themeinwp. (2019, August 27). NBA, like other sports, must stand firm on HGH use. The Oracle. https://www.usforacle.com/2006/06/22/nba-like-other-sports-must-stand-firm-on-hgh-use/
27. Singh M, Bird S, Charest J, Huyghe T, Calleja-Gonzalez J. Urgent wake up call for the National Basketball Association. J Clin Sleep Med. 2021;17(2):243–248.
28. UpToDate. (n.d.). UpToDate. https://www.uptodate.com/contents/genetics-clinical-features-and-diagnosis-of-marfan-syndrome-and-related-disorders
29. Pinto, B. (2021, December 8). Insight Digital Magazine. Insight Digital Magazine. https://www.thechicagoschool.edu/insight/psychology/nba-mental-health-awareness/

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