

Baseball is a popular sport and is often referred to as America's National Pastime. Although baseball is considered safe because of it being a non-contact sport, that isn't always true and catastrophic injuries still occur frequently at the high school and collegiate levels of play. Studies on catastrophic injuries in baseball are limited and require more investigation. The last study regarding catastrophic injuries in high school and collegiate baseball players was performed by Boden et al. and included data from 1982 until 2002. This study will examine data from 2002-2022 and will identify factors to reduce these injuries. Data from the National Center for Catastrophic Sports Injury Research (NCCSIR) was used to describe catastrophic sport-related injuries and illnesses among high school and collegiate baseball players. According to the NCCSIR data, there were 46 direct and 48 indirect collegiate and high school baseball injuries between 2002 and 2022, direct meaning injuries resulting directly from participation in the skills of the sport and indirect meaning caused by systematic failure because of exertion while participating in a sport activity, resulting in a total of 94 injuries being reported. Direct traumatic injuries had the highest occurrences of injury among collegiate (10) and high school (36) baseball players. The injuries were cross tabulated into basic and specific mechanism of injuries and player type in the NCCSIR data. The most common mechanism of injury between 2013-2022 was contact with apparatus or object (61%), followed by contact with player (31%), and then contact with ground/surface (8%). Among high school events, injuries and illnesses occurred most frequently during competitions (37.7%) and practices (34.8%), while among collegiate level events, they occurred most frequently during competition (32%) and non-athletic activities (28%). The greatest number of fatalities occurred during practice (43.2%) and non-athletic activity (24.3%) while the greatest number of nonfatalities occurred in competition. There were 37 injuries that resulted in fatalities which accounted for 39.4% of the total number of injuries. The most common cause of death was cardiac/sudden cardiac arrest which accounted for 62.2% of all fatalities. The majority of fatalities were caused by cardiac arrest, suggesting access to AEDs and training in CPR and AED use is critical and should be encouraged to reduce these fatalities. Many injuries were due to being hit by a ball, pitch and/or batted ball, future research is needed to decrease the risk of injuries due to these mechanisms.