

Injury List (IL) Comparison between 2021 and 2019
Spring Training through July Data Only
Stan Conte, PT, DPT, ATC

Disclaimer: The IL is not a true database. It is a roster management tool and is designed to replace injured players with healthy players. The injured are placed on the IL and this prevents having to take them off the 26-man roster without having to go through draft or waivers. In 2019, there were 25 men on the MLB roster, and this was increased to 26 in 2021. No adjustment was made in these calculations because of the increase. Accounting for the extra roster spot in 2021 could change the data slightly.

The only true injury base is the HITS data from the Electronic Medical Records and can be released to teams after the season has been completed. Therefore, this database could not be used in this report since the 2021 data will not be available until after the season.

Methodology: The IL list was obtained via MLB and all info here is de-identified.

1. The comparison was between the first “month” of the season of 2019 and 2021. Players can be put on the IL prior to the start of the season. All IL’s that were placed on the IL during spring training were used in the calculations. The first IL in 2019 was on 2/13/19 and the first in 2021 was on 2/17/21.
2. Only orthopedic injuries were included. viral infections were excluded.
3. All IL were calculated until the last day of **July in 2021 and 2019.**

Total IL Placements 2019 versus 2021

There has been a 21.5% increase in the number of placements in 2021 compared to 2019. In addition, each month has shown significant increases in 2021 compared to 2019.

However, note that the Spring Training through April, the number of placements were relatively equal. The increases in placement were May through July. August and September are listed in 2019 for reference only.

Placements 2019 vs 2021			
By Months	2019	2021	% Increase
Feb-April	198	191	-3.5%
May	93	136	46.2%
June	82	118	43.9%
July	72	97	34.7%
Aug	103		
Sept	26		
Total Feb-July	446	542	21.5%

Placements by Team and Position

The first table shows the number of placements by each team with the highest IL numbers at the top.

Team	Placements Ortho
New York Mets	31
San Francisco Giants	26
Toronto Blue Jays	26
Tampa Bay Rays	25
Chicago Cubs	23
Los Angeles Dodgers	23
Milwaukee Brewers	22
San Diego Padres	21
Miami Marlins	20
Minnesota Twins	20
Texas Rangers	20
Arizona Diamondbacks	19
Detroit Tigers	19
Pittsburgh Pirates	18
Houston Astros	17
New York Yankees	17
Atlanta Braves	16
Los Angeles Angels	16
Seattle Mariners	16
St. Louis Cardinals	16
Cincinnati Reds	15
Colorado Rockies	15
Chicago White Sox	15
Baltimore Orioles	14
Boston Red Sox	13
Philadelphia Phillies	13
Washington Nationals	13
Oakland Athletics	12
Kansas City Royals	11
Cleveland Indians	10
Total	542
AVG	18.1
Median	17

The next table demonstrates the percentage of position versus pitcher placements and percentage of starters versus relievers who were placed on the IL in 2021. 59% of the placements were Pitchers. This was similar to 2019 when there were 56% pitchers placed on the IL.

IL by Position	Placements	% of Total
Pitchers	318	59%
Position	224	41%
Total	542	

The next table is breakdown of 2021 Relief versus Starter pitchers with Relievers representing 53% of placements. In 2019, the percentage was similar with 51% Relievers on the IL.

IL by Pitchers	Placements	Total	% of Pitchers
RHS	108		
LHS	41	149	47%
RHR	128		
LHR	41	169	53%
Total		318	

Placements by Body Part

These categories are from the IL Placement list and are similar to body categories in other studies.

This shows significant increases from 2019 in Arm/Elbow, Chest/Back, Pelvis/Hip and Wrist/Hand Fingers as indicated.

The elbow (UCL), Chest (Obliques), and Hips (Groin) are probably related to the increase in soft tissue injuries that will be discussed below.

The Wrist/hand/finger is somewhat interesting. The IL is not detailed enough to see mechanisms of injury such as HBP, etc. In looking in the details, fractures of the wrist/hand/fingers appear to be the highest numbers. In 2019, there were 39 injuries to wrist/hand/fingers and 10 fractures or 26% of the total. In 2021, with 63 injuries to this body part, there were 17 fractures or 27% of the total. There are more injuries in this area in 2021, but the fracture percentage is relatively the same. More in-depth data is needed to determine the exact cause of the increase.

	2019	2021	
Ankle/Foot/Toes	29	21	-27.6%
Arm/Elbow	102	128	25.5%
Chest/Back/Spine	66	82	24.2%
Head	15	10	-33.3%
Internal Organs	3	1	-66.7%
Lower Leg/Knee	47	46	-2.1%
Neck	7	6	-14.3%
Pelvis/Hips	25	37	48.0%
Shoulder	76	75	-1.3%
Upper Legs/Thighs	37	74	100.0%
Wrist/Hand/Fingers	39	63	61.5%
	446	543	21.7%

Soft Tissue Injuries

As indicated in previous analysis on the IL, Soft Tissue injuries are an increasing issue in MLB baseball. In evaluation of the IL through July, we see a continued increase in soft tissue injuries. Soft Tissue injuries are defined as Hamstring, Oblique, Quad, Groin and Calf muscular strains.

This table demonstrates the increases as compared to 2019.

SOFT TISSUE INJURY PLACEMENTS			
	2019	2021	% Increase
Hamstring	25	62	148%
Obliques	21	34	62%
Quad	10	10	0%
Groin	5	19	280%
Calf	14	19	36%
Totals	75	144	92%

Hamstring Injuries continue to be leader in soft tissue injuries with 148% increase. Groin has a larger percentage increase (280%) but the overall numbers are smaller than HS. In looking specifically at the players, there are no players who have recurrent (second) hamstring strains in 2021. Hamstrings have a high recurrent rate, but we are not seeing that as of yet.

In previous medical studies on Hamstring and Oblique injuries, it was noted that the highest percentage of these injuries occurred in the beginning of the season, specifically in April and May. One theory on why this may occur was cold weather in the first part of the season. Another was that players were not properly prepared in the off season or spring training to withstand the increase velocity of running and swinging when the season started. There are other theories out there as well.

In the following analysis, soft tissue injuries were calculated by months in 2021. This table shows the stats.

2021 Soft Tissue Injuries by Month		
	Total/month	% by Month
Spring, April	46	32%
May	35	24%
June	36	25%
July	27	19%

The placements by month do appear to be decreasing as the season goes on. However, the first two months of the season represent 56% of the injuries. This could be due to including spring training in these statistics.

Hamstrings continues to be a concern in MLB injuries on the IL. Although there is a decline in Hamstring injuries in June and July, the numbers remain significantly high compared to 2019.

Hamstrings	Placements	% by Month	
Feb-April	18	29.0%	
May	19	30.6%	April-May= 60%
June	12	19.4%	
July	13	21.0%	
	62		

Elbow Injuries

As indicated above, the number of placements in 2021 as of July, rose to 128 from 102. This represents a 25.5% increase.

The IL does not give us great detail into these elbow injuries. However, we can see how many were related to the UCL and how many were pronator muscle. One must realize that these two structures are interrelated, and the designation may be incorrect.

As indicated, there was an overall increase in Arm/Elbow injuries. These general classifications indicated that Elbow or Forearm **Strains** increase substantially in 2021. Strains indicated a muscle rather than ligament, but it is unclear if this designation is correct. Sprains indicate a

ligament problem, most likely the UCL. That said, it is probably more of a poor initial classification and not reliable. HITS data after the season is the proper method of determining these injuries.

In addition, some in the UCL injuries can be residual from having a Tommy John Surgery in 2020 and it is carrying over to the IL in 2021.

Arm/Elbow	2019	2021
UCL	26	17
SPRAIN	10	10
Surgery	6	14
STRAIN	25	42