

# Injuries in Tennis

By  
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A study by McCurdie, Smith, Bell and Batt 'Tennis injury data from The Championships, Wimbledon, from 2003 to 2012' display the commonest anatomical sites of injury for male and female tennis players over the 10-year period. There is variability between years and between male and female players, but the small numbers of injuries at each anatomical site over a year does not permit analysis of injury trends. Nonetheless, shoulder, knee and lumbar spine presentations are common in both male and female tennis players at The Championships. Male players appear to sustain more groin, hip, ankle and heel injuries, with wrist and foot problems being commoner in female players.

<https://bjism.bmj.com/content/bjsports/51/7/607.full.pdf>

OnCourt is a program for all tennis fans. It contains information on the results of more than 1 million tennis matches, played by the best players on the planet since 1990. The program includes both men's and women's tennis. With this program you can get a lot of statistical information about any tennis player, about any tennis tournament or histories of the head-to-head matches of any two players. The software also contains a list of known injuries with date of injury shown. For example, for Roger Federer, the known injuries recorded are

- 15/05/2006 Fatigue
- 30/10/2006 Fatigue
- 31/10/2008 Back

All of these known player injuries are recorded in the OnCourt mdb database file.

<http://oncourt.info/>

OnCourt also lists the last four matches retired for singles and doubles with the current result. For example, for Roger Federer the last matches retired (singles) are

- 13/05/2019 Stefano Tsispas w/o
- 10/11/2014 Novak Djokovic w/o
- 2/01/2012 Jo-Wilfried Tsonga w/o
- 27/10/2008 James Blake w/o

There are no matches listed for doubles where Roger Federer has retired. Given that all the matches for Roger Federer were a w/o (walk over with no result), explains why these matches are not recorded as known injuries.

For Novak Djokovic, the last three matches where he retired did represent a score line, but these were not recorded as known injuries (with the last match retired on 26/08/2019). However, on the 7/05/2010 Novak Djokovic retired with a score line and this was recorded by OnCourt as a known injury as illness. The data used to record known injuries in OnCourt for men are from 06/06/06-04/08/10 and for women 06/06/06-20/09/12. Also, the data used to obtain known injuries are not always a result of a player retiring.

On the 07/09/2008, the author extracted all the known injuries from the OnCourt database and can be downloaded from <http://strategicgames.com.au/injuries.xls>. For men there were a total of 810 injuries and for women 236. The discrepancy between the number of recorded injuries between men and women, men be a result of men playing best-of-5 set matches compared to women playing best-of-3 set matches in grand slam singles, suggesting that men may obtain a higher number of injuries than women. A list of the most number of anatomical sites of injury are listed for men and women in table 1. For men the highest percentage of injuries are Back (13.5%), Shoulder (11.7%) and Ankle (6.3%). For women the highest percentage of injuries are Ankle (10.2%), Back (7.6%) and Shoulder (7.2%). This could be interpreted by men typically winning a high percentage of points on serve (mainly the 1st serve) causing injuries from the back and shoulder. Whereas women are not winning as a higher percentage of points on serve compared to men and proportionally causing a greater number of injuries from the ankle. These results agree with the study from McCurdie, Smith, Bell and Batt where shoulder and back injures are common amongst men and women. However, table 1 indicates that ankle injuries are most common amongst women, whereas the study from McCurdie, Smith, Bell and Batt indicate that wrist and foot problems being commoner in female players. Further, the injuries could be conditioned on the court surface, type of event (grand slams compared to other events) and even location (to recognize weather conditions). Also, other injuries that are non-anatomical could be analysed conditioned on these factors. For example, from the sample taken from table 1 men obtained Illness (3.7%) and Abdominal (2.8%) of known injuries, whereas women obtained Gastrointestinal Illness (6.8%), Viral Illness (4.7%), Respiratory Illness (1.7%), Heat Illness (3.8%), Illness (0.4%) and Abdominal (3.0%) of known injuries. Hence Illness has been subdivided amongst women totalling 17.4% of known injuries compared to only 3.7% for men.

On the 04/10/2019, the author extracted all the known injuries from the OnCourt database and can be downloaded from <http://strategicgames.com.au/injuries2.xlsx>. For men there were a total of 1562 injuries and for women 308. However, 397 injuries were recorded as Unknown. Also, it would be interesting to know why the known injuries were discontinued for men from the 04/08/10 and for women from the 20/09/12. Table 2 represents a list of the most number of anatomical sites of injuries similar to table 1, but excluding the 397 unknown injuries present for men. Similar results are given from table 1, where for men the highest percentage of injuries are Back (12.4%), Shoulder (10.4%) and Ankle (6.8%). For women the highest percentage of injuries are Ankle (9.7%), Back (8.8%) and Shoulder (8.8%).

Injury	Men		Women	
	Number	Percentage	Number	Percentage
Back	109	13.5%	18	7.6%
Shoulder	95	11.7%	17	7.2%
Ankle	51	6.3%	24	10.2%
Knee	44	5.4%	14	5.9%
Leg	42	5.2%	4	1.7%
Wrist	35	4.3%	15	6.4%
Elbow	19	2.3%	0	0.0%
Foot	20	2.5%	1	0.4%
Groin	17	2.1%	4	1.7%
Hamstring	16	2.0%	1	0.4%
Hip	21	2.6%	1	0.4%
Thigh	13	1.6%	8	3.4%
Calf	2	0.2%	4	1.7%
Arm	12	1.5%	5	2.1%
		<b>61.2%</b>		<b>49.2%</b>

Table 1: List of the most number of anatomical sites of injury for men and women from the 07/09/2008

Injury	Men		Women	
	Number	Percentage	Number	Percentage
Back	145	12.4%	27	8.8%
Shoulder	121	10.4%	27	8.8%
Ankle	79	6.8%	30	9.7%
Knee	76	6.5%	21	6.8%
Wrist	53	4.5%	19	6.2%
Foot	30	2.6%	10	3.2%
		<b>43.3%</b>		<b>43.5%</b>

Table 2: List of the most number of anatomical sites of injury for men and women from the 04/10/2019