

# Longitudinal Analysis of Injury and Illness Trends in Professional Tennis Players

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**Objective:** To examine illness and injury trends and highlight gender differences in tennis players competing in a major professional tennis tournament over a 16 year period between 1994 and 2009.

**Target audience:** medical professionals, coaches, and players interested in updating and revising current programs and strategies to reduce prevalence.

**Setting/Participants:** Archival data from the US Open Tennis Championships main draw from 1994-2009.

## **Illness Data from the US Open Tennis Championships from 1994 to 2009** (accepted 2012, Clinical J of Sports Medicine)

**Results:** The average number of illness cases over the 16-year period analyzed was  $56.4 \pm 11.0$  per year requiring assistance by the medical staff. Statistical analyses showed a significant fluctuation in dermatological (DERM), renal/urogenital/gynaecological, neurological, ophthalmic and otorhinolaryngological (ENT), infectious, and environmental cases ( $p < 0.05$ ). ENT and DERM conditions were the most commonly reported types of illness for both men (26.6% and 22.9%, respectively) and women (32.4% and 23.7%, respectively).

**Conclusions:** Acute injuries occurred more frequently than gradual-onset injuries, and most common injury types were similar to previously examined populations. However, there were differences in injury location trends compared to previous research suggesting further research in this elite-level population is warranted. Numerous medical systems are susceptible to illness in tennis players. Sport-specific factors may influence susceptibility to common illnesses experienced by professional tennis players. Ongoing research in elite tennis players at the adult and youth is necessary to examine these trends further.

**Outcome Measures:** Data collected at the US Open Tennis Championships between 1994 and 2009 was classified using guidelines presented in a sport-specific consensus statement. Each case was categorized according to the medical system effected, and impact on play availability during the tournament. Rates were determined based on the exposure of an athlete to a match event, and were calculated as the ratio of cases per 1000 match exposures (ME).

## **Injury Trend Analysis from the US Open Tennis Championships between 1994 and 2009** (accepted 2012, British J Sports Medicine)

**Results:** There was a statistically significant fluctuation in injuries across the timeframe analyzed ( $p < 0.05$ ). There were  $76.2 \pm 19.6$  total injuries and  $43.8 \pm 11.8$  acute injuries per year seeking medical assistance. Muscle or tendon injuries were the most common type of acute injury (84.0%). The rate of lower limb injuries was significantly higher than upper limb and trunk injuries ( $p < 0.01$ ). The ankle, followed by the wrist, knee, foot/toe, and shoulder/clavicle were the most common injury sites.