**S5 Appendix. Exponential Weighted Moving Average (EWMA)**

To consider the recent training workload of a player, we compute the exponential weighted moving average (ewma) of his most recent training sessions. The ewma decreases exponentially the weights of the values according to their recency [32, 33], i.e., the more recent a value is the more it is weighted in an exponential function according to a decay α = 2/(span 1). In accordance with the exponential function, the moving average is computed as:

EWMA*t* = α[xt−(xt−1+(1−α)2xt−2+…+(1−α)n−1xt−n)]+xt

We vary span = 1, … , 10 to detect the value leading to the best classification performance. We hence train a decision tree on the feature set all by using every of the ten span values. Fig 10 shows the cross-validated AUC and F1-score of the decision tree DT(RFE) varying the value of span. We observe that a 6 training span is the best predictive window to injury prediction in our dataset (S5 Fig).

**Reference**

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