

NOTIFICATION OF ENHANCEMENT TO THE ITF WORLD TENNIS NUMBER ALGORITHM CALCULATION

In September 2024, the ITF will be making enhancements to the ITF World Tennis Number (WTN) calculation. The ITF World Tennis Number's weekly calculation is now powered by data from over 80 nations, with over 30 million match records from around the world.

As we continue to receive data, the calculation is continuously monitored and tested by the ITF. When necessary, the ITF will responsively and transparently adjust the algorithm to ensure it remains accurate. This change will take place on Wednesday September 11, 2024.

What are the changes?

This enhancement to the WTN algorithm will reposition cohorts of players on the current scale of 40-1, particularly with regard to different age groups. **While your number is likely to be adjusted, movement relative to your peers in your own age groups should be similar if you play regularly.**

The changes that are being made are based on feedback from players, coaches and member nations, as well as using the increased data we are receiving to inform the decision-making process. The key changes are:

- 1. As with any algorithm, it is important to ensure its accuracy and having closely monitored the data from junior players and their changes over time, it's become increasingly apparent that some players are being initialized too high. By adjusting where players begin their journey on the WTN scale, they will now see a greater improvement to their rating as their level improves.*
- 2. We are enabling player ratings to transition to their 'true' skill level faster from the initial rating given to them. This will mean that when a player is given an initial rating that is too low or too high, they will update to a more accurate rating much faster from their first few matches.*
- 3. Every match you play counts towards your rating but it's important that the rating change reflects the difference in ability. Players will now experience smaller changes to their WTN in matches when losing to a superior player. However, players will still see a sharp increase to their rating should they beat a player with a substantially better rating.*

The ITF have tested these changes and we have seen a positive impact on the algorithm performance.

The principles behind the ITF World Tennis Number calculation and the most Frequently Asked Questions about the change can be found below.

PRINCIPLES OF THE ITF WORLD TENNIS NUMBER CALCULATION

THE PRINCIPLES OF THE ITF WORLD TENNIS NUMBER ARE DESIGNED TO PROVIDE GUIDANCE TO PLAYERS AS TO HOW THEIR WTN MAY CHANGE, WHAT MAY IMPACT THEIR WTN AND HOW THEY CAN USE THIS TO SUPPORT THEIR DEVELOPMENT AND ENJOYMENT.

Algorithm

The ITF World Tennis Number is based upon an objective mathematical calculation.

The more match results available to the system, the more accurate the number and therefore, greater 'confidence' in the WTN.

Calculation

The WTN algorithm uses all the match result data shared with the ITF from a player's history, dating back to 2016, to calculate an ITF World Tennis Number. When a player or partnership compete, the algorithm analyzes pre-match ratings for all the players on the court. From there, the algorithm predicts an expected outcome for the match based on the relative ratings of each player.

A player's number will change based on the difference between expected results and the actual match outcome. A player may see little to no improvement based on one result if the algorithm predicts the actual outcome. The more match results the system holds, the more accurate a player's rating becomes. Using the number of matches a player has, along with some other pieces of data, a player's rating may become "verified" with a blue tick indicating that the system has enough information to confidently generate an accurate WTN rating.

WTN also analyzes matches at the set level, meaning the algorithm considers each individual set as its own result. Simply, if a match ends 2 sets to 1 in your favor, then the system will update your number with two set 'wins' and one set 'loss'. Even if you don't win the overall match, the sets you have won will be considered accordingly in the WTN calculation.

Scale

The ITF World Tennis Number is one scale from 40 (lowest) to 1 (highest). All players appear on one scale, whether you are the very best professional on the tour, a complete beginner playing their first match or a regular player at your local club. Regardless of a player's age or gender, two players with a similar verified WTN should have a competitive match.

Game zONE

A player's Game zONE is an indicator of the WTN range in which a player can be expected to have a competitive match. Game zONE includes players with slightly higher or lower WTNs than your own. It is your range of opponents where either player would have a probability of winning the match of between 35%–65%.

Singles & Doubles

Players will receive a separate singles and doubles number.

Dynamic System

A dynamic system that will update weekly on a Wednesday taking into account all results in the system prior to the algorithm run.

Global Results

Any match result that is collected from a WTN supporting nation will be used in the WTN algorithm. Results from international competitions will also be used.

FREQUENTLY ASKED QUESTIONS

Q: I am a Junior Player, what is the effect on my current ITF World Tennis Number ?

Most junior players will experience a decrease in their rating as a result of the changes. This is because addressing some junior players being currently initialized too strongly brings the cohort down. The player ratings are now more of an accurate reflection of age, with a general incremental increase in initial rating expected from ages 10 & up.

Q: I am an Adult Player, what is the effect on my current ITF World Tennis Number?

The majority of adult players should expect only minor changes to their World Tennis Number. Players playing many matches against Junior players will likely shift closer to 40.

Q: Does this affect Doubles ITF World Tennis Numbers?

Yes, the same principles apply.

Q: Why is the ITF making these changes?

The effect of the modifications will be to position players on the scale to ensure that player populations all over the world are best aligned. The improved accuracy will also provide greater confidence for players when self-selecting any opponents to play.

Q: When will the changes take place?

The scheduled rating run on the Wednesday 11th September will use the improved calculation which will be backdated to include all the results in the system.

Q: Does this mean my previous WTN was wrong?

Your ITF World Tennis Numbers previously was accurate within your cohort of players and will remain so with the changes. What will primarily change is your number relative to players outside your network. The ITF World Tennis Number is designed to accurately reflect the ability of all players, and these changes will ensure players can always find a competitive match regardless of factors such as age. The changes improve the accuracy of the ITF World Tennis Number.

Q: Why is my number now worse?

Your latest number will now be more aligned to the age group you are competing within. Please refer to questions 1, 2 or 3 for the specific impact in relation to age groups.

Q: Will these algorithm changes become a frequent occurrence?

As we continue to receive data, the algorithm calculation will benefit from being enhanced to ensure we consistently deliver the fairest ratings possible for players. We will, however, always inform players of any major changes. It is anticipated that changes will only be made annually as previously stated.