# How to Combine Three Excel Columns into One

Authored by

**stats writer**

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## Mastering Data Management in Microsoft Excel

In the contemporary landscape of **data analysis**, the ability to manipulate and reorganize information within a **spreadsheet** is an essential skill for professionals across all industries. Microsoft Excel remains the industry standard for these tasks, offering a robust suite of tools designed to streamline complex workflows. One of the most frequent challenges users face is the need to consolidate disparate data points into a unified format. For instance, when dealing with employee records, contact lists, or inventory catalogs, you may find that information is spread across multiple columns that would be more useful if combined into one.

Combining three columns into one in Excel allows for better data visualization and simplifies the process of generating reports or performing **VLOOKUP** operations. By merging data, you can create unique identifiers, full names from separate first, middle, and last name columns, or complete mailing addresses. This process, often referred to as string concatenation, can be performed using several different techniques depending on the specific requirements of your dataset, such as whether you need to include spaces, commas, or other separators between the values.

Understanding the nuances between different consolidation methods is key to maintaining data integrity. While some users might prefer the traditional ampersand operator, others may find the more modern **CONCAT** or **TEXTJOIN** functions to be more efficient. Each method has its own set of advantages and limitations, particularly when handling empty cells or large ranges of data. In the following sections, we will explore the most effective ways to merge three columns into one, ensuring your data remains accurate, readable, and professionally structured.

## The Evolution of Consolidation: CONCAT vs. CONCATENATE

Historically, the primary method for joining text in Excel functions was the CONCATENATE function. However, with the release of Office 2016 and Office 365, Microsoft introduced the CONCAT function as a more powerful and versatile successor. The older function required users to select each **cell reference** individually, which could be incredibly tedious when dealing with dozens of columns. The newer version allows for the selection of entire ranges, significantly reducing the potential for manual entry errors and saving valuable time during the data preparation phase.

When you use the **CONCAT** function to merge three columns, the software essentially appends the content of each cell to the one preceding it. This results in a continuous string of text. While this is perfect for creating serial numbers or internal codes, it may not be ideal for human-readable text unless you manually insert spaces within the formula. Despite this, the **CONCAT** function is highly valued for its simplicity and its ability to handle **array** references, making it a staple in the toolkit of

any serious data analyst.

It is important to note that while CONCATENATE is still available for backward compatibility with older versions of Excel, Microsoft officially recommends transitioning to the newer functions. This shift ensures that your workbooks remain compatible with the latest software updates and performance enhancements. By mastering the **CONCAT** syntax, you position yourself to manage larger datasets with greater ease, providing a solid foundation for more advanced data analysis projects.

## Practical Demonstration: Using CONCAT to Merge Employee Data

To understand how these functions operate in a real-world environment, let us consider a dataset containing employee sales information. In many organizational databases, names or IDs might be split across several columns for categorical sorting. However, for a final report, you might need these elements joined together. The following example demonstrates how to use the **CONCAT** function to achieve a seamless merge of data across three specific columns.



| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | **Store** | **Employee** | **Sales** | | | |
| 2 | North | Andy | 24 | | | |
| 3 | North | Bob | 19 | | | |
| 4 | South | Chad | 15 | | | |
| 5 | South | Doug | 30 | | | |
| 6 | East | Eric | 12 | | | |
| 7 | East | Frank | 17 | | | |
| 8 | West | Greg | 18 | | | |
| 9 | West | Henry | 30 | | | |
| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |
| 16 | | | | | | |
| 17 | | | | | | |

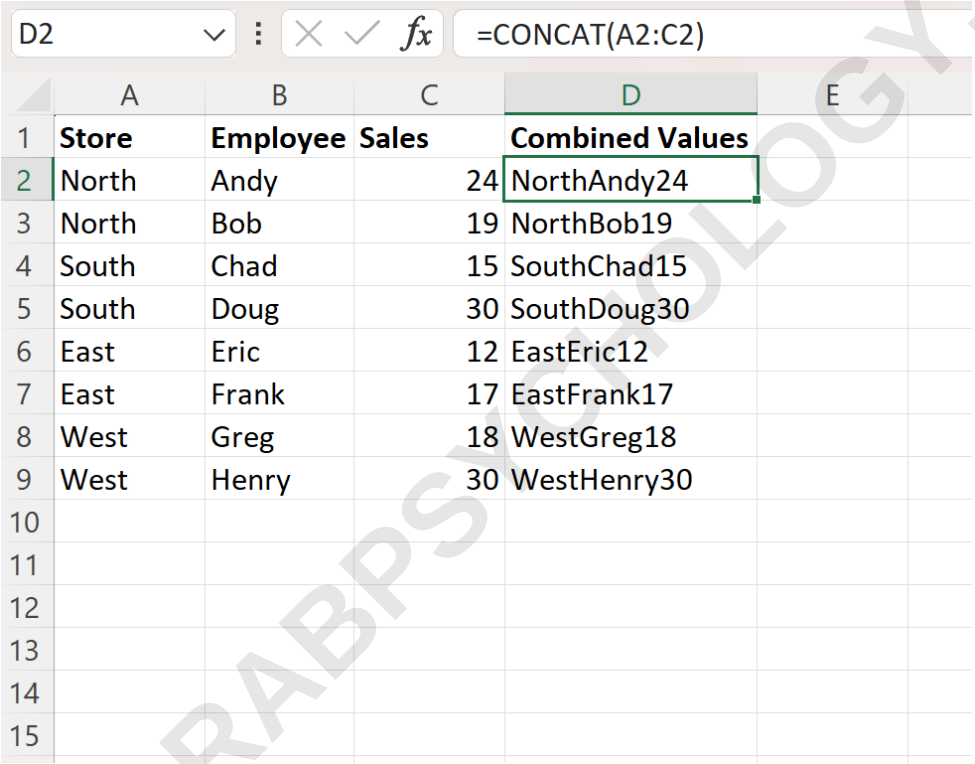
There are two common methods you can use to combine three columns into one in Excel:

**Method 1: Use CONCAT Function**

**=CONCAT(A2:C2)**

This particular formula will combine the values from cells **A2**, **B2** and **C2** into one cell with no spaces between the values. This is particularly useful when you are generating a unique **primary key** or a concatenated string where delimiters are not required. By referencing the range **A2:C2**, you instruct Excel to look at all horizontal values in those three columns and merge them into the target cell in column D.

Once you have entered the formula into the first row of your data, you can utilize the **AutoFill** feature to apply the logic to the rest of your list. We can type the formula into cell **D2** and then click and drag this formula down to each remaining cell in column D, as illustrated below:




| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | **Store** | **Employee** | **Sales** | **Combined Values** | |
| 2 | North | Andy | 24 | NorthAndy24 | |
| 3 | North | Bob | 19 | NorthBob19 | |
| 4 | South | Chad | 15 | SouthChad15 | |
| 5 | South | Doug | 30 | SouthDoug30 | |
| 6 | East | Eric | 12 | EastEric12 | |
| 7 | East | Frank | 17 | EastFrank17 | |
| 8 | West | Greg | 18 | WestGreg18 | |
| 9 | West | Henry | 30 | WestHenry30 | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |



Column D successfully combines the values from columns A, B and C into a single cell with no space in between the values. This ensures that the data is consolidated into a single **string** while maintaining the original sequence of information. For those interested in deeper technical details, you can find the complete documentation for the CONCAT function on the official Microsoft support website.

## Leveraging the TEXTJOIN Function for Professional Formatting

While the **CONCAT** function is excellent for simple merging, many professional scenarios require a

more nuanced approach. If you are combining first names, middle initials, and last names, a string without spaces would be difficult to read. This is where the TEXTJOIN function becomes invaluable. Introduced as a more advanced alternative, **TEXTJOIN** allows users to specify a delimiter--such as a space, comma, or semicolon--that is automatically inserted between each joined value.

One of the most powerful features of **TEXTJOIN** is its ability to ignore empty cells. In a dataset of three columns, if the middle column is blank for certain rows, a standard concatenation might result in double spaces or trailing delimiters. **TEXTJOIN** includes a logical argument that, when set to **TRUE**, skips these empty entries, ensuring a clean and professional output every time. This level of automation reduces the need for manual cleanup and complex **IF** statements within your formulas.

Using **TEXTJOIN** is considered a best practice when preparing data for **CSV** (Comma Separated Values) exports or when creating labels for mailing. By controlling exactly how the strings are joined, you maintain a high level of consistency across your entire **spreadsheet**. This function is particularly favored by power users who need to manage messy real-world data without spending hours on manual adjustments.

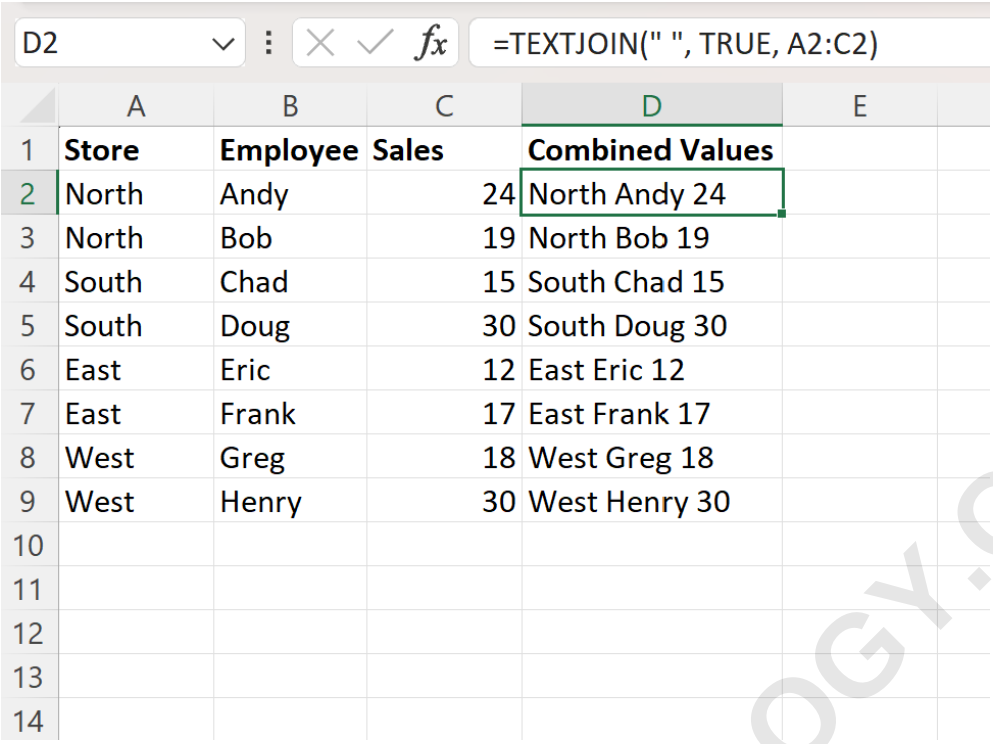
## Customizing Delimiters for Readable Data Outputs

To implement the **TEXTJOIN** method, you must define the specific character you wish to use as a separator. In the following example, we will use a space as the delimiter to ensure the combined data from three columns is easily legible. This is the standard approach for merging names or descriptive text where clarity is the priority.

**Method 2: Use TEXTJOIN Function**

**=TEXTJOIN(" ", TRUE, A2:C2)**

This particular formula will combine the values from cells **A2**, **B2** and **C2** into one cell with spaces between the values. The first part of the formula, `" "`, represents the space delimiter. The second argument, `TRUE`, instructs Excel to ignore any empty cells within the specified range. Finally, `A2:C2` identifies the source data to be merged. We can type this formula into cell **D2** and then click and drag this formula down to apply it to the entire column:




| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | **Store** | **Employee** | **Sales** | **Combined Values** | |
| 2 | North | Andy | 24 | North Andy 24 | |
| 3 | North | Bob | 19 | North Bob 19 | |
| 4 | South | Chad | 15 | South Chad 15 | |
| 5 | South | Doug | 30 | South Doug 30 | |
| 6 | East | Eric | 12 | East Eric 12 | |
| 7 | East | Frank | 17 | East Frank 17 | |
| 8 | West | Greg | 18 | West Greg 18 | |
| 9 | West | Henry | 30 | West Henry 30 | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |

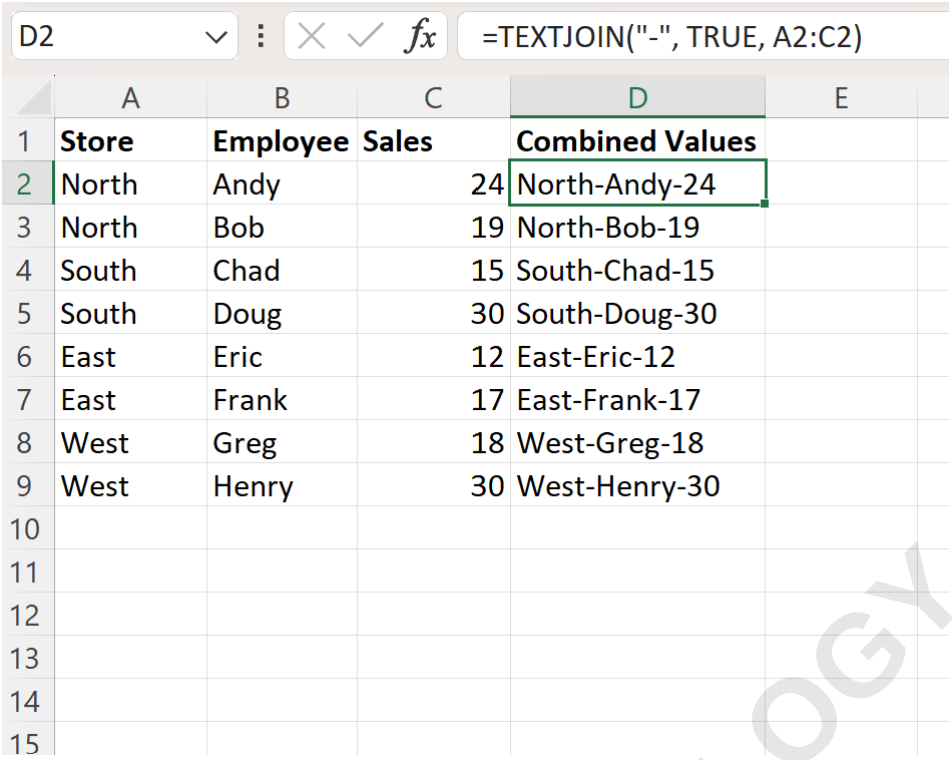


As shown in the output, Column D now contains the values from columns A, B and C merged into a single cell with a space in between each value. This creates a much more readable result compared to the **CONCAT** method. Furthermore, the flexibility of **TEXTJOIN** allows you to swap the space for any other character, such as a hyphen or a slash, depending on the requirements of your project.

For example, if you were merging dates or product codes, a dash might be more appropriate. We could use the following formula to combine the values from columns A, B and C with a dash in between the values:

**=TEXTJOIN("-", TRUE, A2:C2)**

The following screenshot demonstrates the result of this formula in practice:




| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | **Store** | **Employee** | **Sales** | **Combined Values** | |
| 2 | North | Andy | 24 | North-Andy-24 | |
| 3 | North | Bob | 19 | North-Bob-19 | |
| 4 | South | Chad | 15 | South-Chad-15 | |
| 5 | South | Doug | 30 | South-Doug-30 | |
| 6 | East | Eric | 12 | East-Eric-12 | |
| 7 | East | Frank | 17 | East-Frank-17 | |
| 8 | West | Greg | 18 | West-Greg-18 | |
| 9 | West | Henry | 30 | West-Henry-30 | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |



Column D now combines the values from columns A, B and C into a single cell with a dash in between the values. This illustrates how easily you can customize the output to fit specific **data analysis** needs. Detailed documentation for the TEXTJOIN function is available for users who wish to explore its full range of capabilities.

## Alternative Techniques: The Power of the Ampersand Symbol

While dedicated functions like **CONCAT** and **TEXTJOIN** are highly efficient, Excel also offers a manual method using the ampersand (**&**) operator. This symbol acts as a joining operator between two or more text strings. For users who prefer not to memorize function names or who are working on very small tasks, the ampersand provides a quick and visual way to merge cells. To combine three columns using this method, you would write a formula such as `=A2&B2&C2`.

The ampersand method offers a high degree of control because you can manually insert text or spaces between the **cell references**. For example, to include a space, you would write `=A2 & " " & B2 & " " & C2`. While this is more descriptive, it becomes cumbersome as the number of columns increases. It also lacks the "ignore empty" logic found in **TEXTJOIN**, meaning you might end up with extra spaces if one of the columns is blank. However, for a quick one-off merge, it remains a popular and reliable technique among **spreadsheet** users.

Choosing between the ampersand and a built-in function often comes down to personal preference and the complexity of the task. If you are building a template that other people will use, functions

like **TEXTJOIN** are generally preferred because they are more robust and less prone to breaking if the data structure changes slightly. Nevertheless, understanding the ampersand operator is fundamental to mastering Excel formulas and provides a deeper insight into how the software handles text strings.

## Best Practices for Maintaining Data Integrity

When combining columns in Excel, it is crucial to follow best practices to ensure your data remains accurate and useful. One common mistake is forgetting that the result of a concatenation formula is a formula itself, not a static value. If you delete the original columns (A, B, or C), the combined data in Column D will disappear or result in a **REF error**. To prevent this, once you are satisfied with the merged result, you should copy the merged column and use **Paste Special > Values** to convert the formulas into permanent text.

Another important consideration is data cleaning prior to merging. Use the **TRIM** function to remove any leading or trailing spaces that might exist in the original columns. If **A2** contains "Sales " and **B2** contains "Dept", a simple concatenation might result in "Sales Dept" (with two spaces). By wrapping your **cell references** in TRIM, or by performing a cleanup pass before merging, you ensure that the final output is consistent and free of invisible formatting errors that could disrupt later **data analysis**.

Finally, always consider the **data type** of the columns you are joining. If you are combining a text column with a date or currency column, Excel may lose the formatting of the numbers, displaying them as raw integers. In such cases, you can use the **TEXT** function within your merge formula to specify the desired format, such as `=A2 & " " & TEXT(B2, "mm/dd/yy")`. This attention to detail separates basic users from advanced Excel professionals and ensures that your reports are both accurate and aesthetically pleasing.

## Conclusion and Final Thoughts on Column Consolidation

In summary, combining three columns into one in Excel is a fundamental task that can be achieved through various methods, including **CONCAT**, **TEXTJOIN**, and the ampersand operator. Each method serves a specific purpose, from creating compact codes to generating readable full-sentence strings. By choosing the right tool for the job, you can significantly enhance your **productivity** and ensure that your data is organized in the most logical and accessible manner possible.

As you continue to develop your skills in **data analysis**, you will find that these consolidation techniques are building blocks for more complex operations, such as dynamic dashboard creation and automated reporting. Mastery of functions like **TEXTJOIN** allows you to handle real-world data variability with confidence. We encourage you to experiment with different delimiters and settings

to find the workflow that best suits your specific organizational needs. For more advanced tips and tricks, you can explore the following tutorials on common Excel operations:

How to use VLOOKUP for cross-referencing data.
Advanced techniques for Pivot Table generation.
Using Conditional Formatting to highlight data trends.
Mastering the IF and IFS logical functions.
How to remove duplicates and clean large datasets.