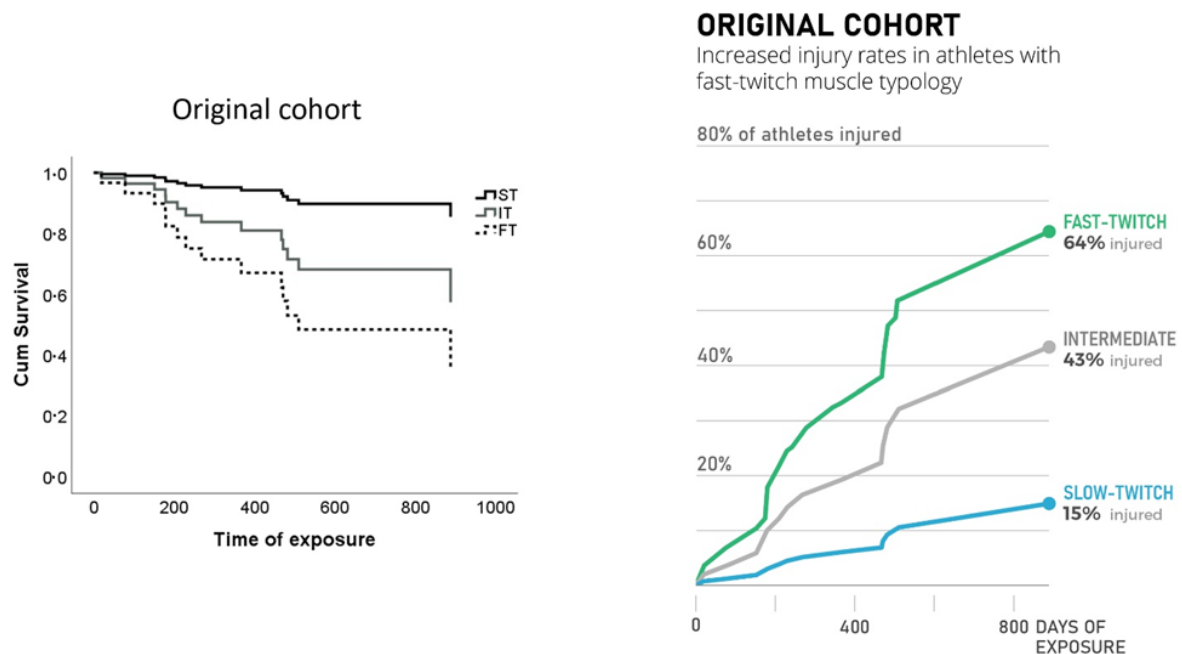


MAKING A DATA VISUAL NOISE-FREE

Removing noise from a data visual is not only about taking things away such as gridlines, axes or legends. That's just one part of it, which we could call removing physical noise. Improving the signal-to-noise ratio is often also about adding little things that help our audience better understand the visual. We are helping them by removing mental noise, or mental barriers.

Towards a noise-free data visual

This visual is a concrete example from sports science. It's a typical chart you could encounter in a scientific article or report. It does, however, contain a lot of noise.



Based on research by [Dr. Eline Lievens](#), Ghent University

The improved visual on the right presents the same data in a much clearer way. To achieve this, we made a lot of small choices, all meant to remove mental noise and make the chart just a little bit easier to interpret.

A lot of tiny changes...

- First of all, the message is now loud and clear from the title: we see an increased injury rate in athletes with a specific muscle typology. Remember – a clear visual tells a story, it shouldn't hide the story from our audience. 'Original cohort' is not a very insightful title.
- We flipped the chart around to talk about 'injury rate' rather than 'cumulative survival'. The latter is a scientific term which might confuse audiences not familiar with it. Athletes are not dying, they are simply getting injured.
- Having a vertical axis makes the chart hard to read. To know the values, especially on the right-hand side of the chart, we need to take out a ruler to estimate them. The improved visual uses gridlines, making it much easier to see when lines cross a certain percentage.
- We also removed the legend and confusing abbreviations, and replaced them with direct labelling, clear colours, and explicitly showing the data values.

- Finally, in a more technical change we switched from stepwise interpolation to linear interpolation of the data points, giving us a more realistic approximation of the growing number of injuries.

...with a lot of impact

That's a lot of tiny changes to improve the readability of the data visual. Individually, they are not very spectacular or groundbreaking. But together, they can turn a complex chart into a clean visual that's much faster to interpret, with a much clearer message.

If you want to know more about visualizing data in the right way, you can check out the other videos in this series. Or I invite you to read my book, [Powerful Charts](#), that will give you actionable insights and practical guidelines to create data visuals that truly engage and inspire your audience.