

Why children misbehave when they are tired

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Credit: AI-generated image ([disclaimer](#))

Being tired is a feeling we often experience. When we do certain activities—physical or mental—over a period of time, or even after experiencing intense emotional states, we feel tired, perhaps even exhausted.

We could define [fatigue](#) as a lack of strength after physical, intellectual or emotional work. Boredom, unhappiness, disappointment, weariness,

tedium or annoyance can also leave us exhausted.

In any case, [fatigue](#) has curious effects on our behavior, resulting in greater difficulty maintaining self-control.

This is very perceptible in children, because when they are tired, either after strenuous activity or as a result of boredom or disappointment, they tend to behave in ways that annoy us. They tend to "misbehave." But why is this?

Failures in the brain control tower

Let's start by talking about how the brain works. The brain is the organ of thought where all our behaviors are generated and managed. Each of its different areas fulfills [specific tasks](#) within the overall functioning of the organ.

Behavioral control is handled specifically by an area called the prefrontal [cortex](#). It is located in the frontmost part of the brain, just behind the forehead, in the most superficial layers of neurons—hence its name.

The prefrontal cortex is responsible for managing complex cognitive tasks, which are grouped under the name of [executive functions](#). They work like airport control towers, making all air traffic flow smoothly in a flexible, non-static way, so that it can adapt to any situation that may arise: a change in [atmospheric conditions](#), a flight delay, etc. In other words, the prefrontal cortex helps us to control our behavior.

Executive functions include the ability to reflect and plan, to make decisions based on reasoning and to rationalize and manage our emotional state.

Also included in this group is [working memory](#), which is the set of

processes that allows us to store and temporarily handle information for the performance of complex cognitive tasks such as [language comprehension](#), reading, mathematical skills, learning or reasoning—not to mention [cognitive flexibility](#), which is the brain's ability to adapt our behavior and thinking to changing, novel and unexpected concepts and situations, or the [mental capacity](#) to contemplate several concepts at once.

What does all this have to do with fatigue and how does it affect the behavior of adults and children? It's quite simple. Although we may like to boast that we have a very large brain, the reality is that it represents only 2 or 3% of the total mass of our body. And yet [it consumes](#) no less than 20%–30% of [metabolic energy](#)—a striking disproportion!

And of the entire brain, the part that [consumes the most](#) is precisely the prefrontal cortex.

When we are short of energy, we are more likely to mess up

When we are tired, our metabolism tends to spread out the usable energy, thus [decreasing](#) the energy available for the prefrontal cortex to perform its functions with [maximum efficiency](#).

In other words, we find it harder to think, plan, decide, manage emotions and store and handle information because the prefrontal cortex has less fuel to function. This also makes our thoughts less flexible and more rigid. As a consequence, we [lose](#) the ability to control our own behavior.

So when we are tired, we tend to say things that we shouldn't, that we know might hurt people we care about. And we do this because the executive functions—the control tower of our behavior—work less

efficiently.

And the same thing happens to children. Despite knowing that there are things they cannot do or that we do not allow them to do (and that they are well aware of), when they are tired, the likelihood of them doing these things, of them "misbehaving," increases.

Boredom has a similar effect to tiredness

Interestingly, when we are bored, disappointed or fed up, something similar happens; although the reason is slightly different.

It turns out that when we are demotivated, the brain also receives less energy, meaning that the [prefrontal cortex](#) cannot function at full capacity. Or, to put it the other way around, [motivation](#) increases the [blood flow](#) to the brain and, with it, the available energy, which in general improves the functionality of executive functions.

That is why, when we are motivated we usually think, plan and decide better, and can manage our emotions much better. Although we should not overdo it. Excessive motivation can also hyper-energize the [brain](#), reducing the efficiency of its functioning, as [a recent study](#) has demonstrated.

And a curious and final fact: there's a good side to being tired. After having carried out a strenuous activity, we tend to be more [creative](#), because when [self-control](#) fails, ideas emerge without filters—or with fewer conscious ones.

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