



Isabelle Simonetto

*Doctor in neuroscience, lecturer  
Addheo*

## Risk management & Covid-19: a neuroscientific perspective

**How does our brain work in a disturbed situation? What is the role of safety? What tools are available to managers to manage safety under uncertainty? Isabelle Simonetto, from Addheo, shares her views from the Icsi webinar held on December 3 2020.**

### How does our brain work in a disturbed situation?

To understand this, we must go back 30,000 years... Because between Cromagnon man and us, the brain... has not changed! **Our brain is still designed to ensure the survival of the species.** That is its priority.

In any disturbed situation, such as a very harsh winter 30,000 years ago or a health crisis today, the brain reacts. How does it respond? It **triggers physical signals**, produces adrenaline, vasopressin and other

neurotransmitters that increase energy tenfold and allow us to focus on the problem at hand.

This focus, this adrenaline, breaks the internal balance and **triggers emotions, in this case, fear.** It is fear that drives us to act: to flee, to fight... We can compare it to how a car works.

In the car, an electronic system alerts you to a pressure or temperature problem by triggering an alarm. If you remove the alarms, you won't have any feedback. In humans, these alarms are our emotions. If you remove them, you remove your ability to act. **The survival of the species depends on our emotions, which allow us to trigger actions.**

### What are the information processing circuits?

All of the information that reaches our brain passes through the thalamus. There are **two possible processing circuits.**

- In the **long circuit**, information is processed by the pre-frontal cortex,

the seat of reason, rationality and analysis, then by the limbic system (emotional memory). **The collaboration of the two systems ensures an appropriate response.** This circuit forms a loop between the rational system and the emotional system. **We call this the classic circuit.**

- **The short circuit is activated when information is considered dangerous or toxic.** Here, information does not pass through the pre-frontal cortex, but goes directly to the limbic system (emotional memory). **While there is no analysis**, the advantage is that **the response and reaction are much faster.**

### Do emotions and safety go hand-in-hand?

Taking safety into account in a company means **accepting that employees will feel emotions** and sometimes be uncomfortable. But this supports efficient actions. To deny this reality is to destroy information.

It's a bit like breaking the indicators on your car's dashboard; you will have no more information. But, in a company, taking safety into account is not the same as **the short circuit**, which leads to a focus on only one thing. If this happens, you can miss other signals and become unsafe.

**Taking safety into account means regulating emotions:** identifying and understanding them. Uncertainty generates the most negative emotions **and this uncertainty leads to a focus on unknown elements, to the detriment of safety.**

## What tools can managers use to create certainty under uncertainty and guarantee safety?

There are three human needs that must be met to provide certainty in the face of uncertainty.

**1. First of all, people must be able to project themselves into the future, to anticipate.** Why? I have a problem; I have to find a way to solve it. And as long as I can't do that, I'll be going in circles: there is no cognitive closure.

In this situation, there are two managerial tools:

- **The briefing.** This allows you to take the temperature of your teams, to gather information, to know who is finding the uncertainty unbearable.
- **The pre-job briefing.** This reliability countermeasure, used in the aeronautics and nuclear industries, consists of asking five questions: What is the expected result? What are the risks, including the worst case? What countermeasures will be implemented, individually and collectively? What situations are likely

to lead to errors? What is our feedback about this activity?

**2. Second, humans need trust to find their way under uncertainty.** Because when you trust, neurobiologically, you produce oxytocin and dopamine, which decreases stress and aggression, among other things.

The managerial tools for generating trust are:

- Simple and clear communication.
- Debriefing. Transparent feedback is essential: what was done well and what wasn't is all made clear.

**3. Finally, we all have a need to belong.** How do we deal with people who are working remotely?

Managerial tools to increase a feeling of belonging:

- **Upward communication**, do not hesitate to consult the team.
- **Debriefing:** provide transparent feedback to your teams, along with regular, predictable check-ins.

**To create certainty under uncertainty, you can use 4 safety countermeasures: the briefing, the pre-job briefing, the debriefing and simple, clear, appropriate upward communication.**



## For more information

>> Follow the "Risk Management & Covid-19" campaign

Icsi is examining the Covid-19 crisis from the angle of the "health crisis and major risk management". It has launched a new program based on 3 axes: an observatory, discussion about the future, and an international perspective.

[Explore the Risk Management & Covid-19 section of our website.](#)