



# safety week 2019

## NOISE

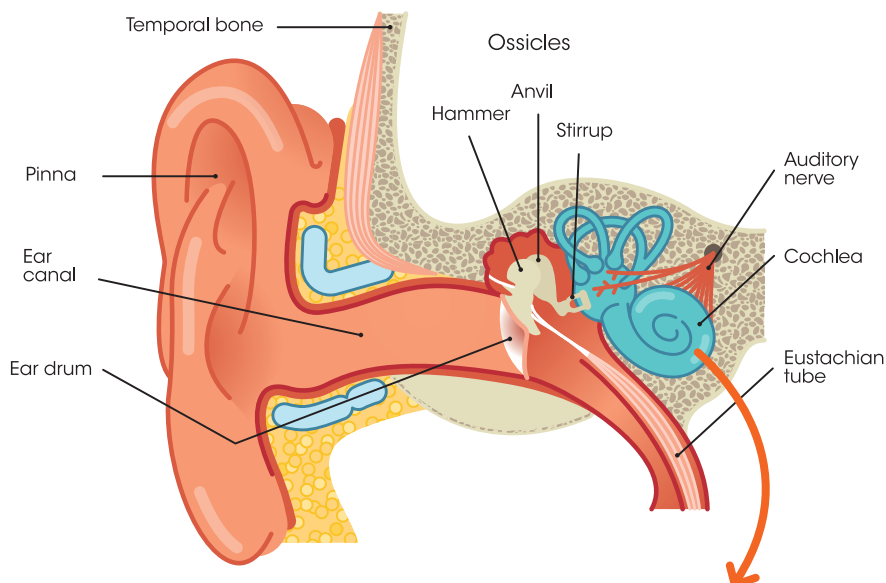


SAFETY,  
THE #1 VALUE AT COLAS

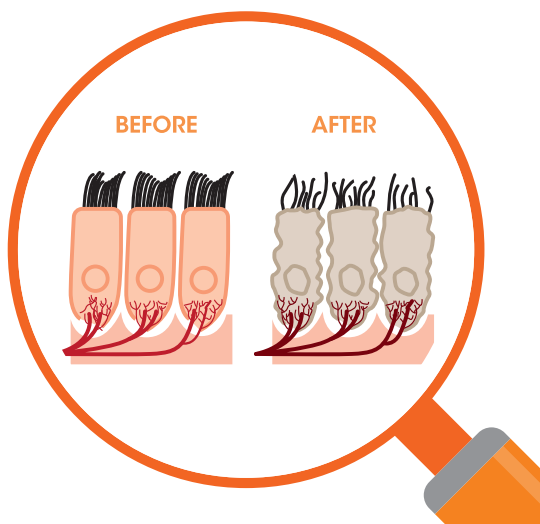


# Popular belief #1 • Hearing loss is only for the elderly

**FALSE**



We have about **15,000 hair cells** at birth, which are **essential for the proper transmission of sound**. **Hair cells can not be regrown when damaged by noise, age or disease**. They decrease in number naturally over time, but exposure to loud noises accelerates the loss.

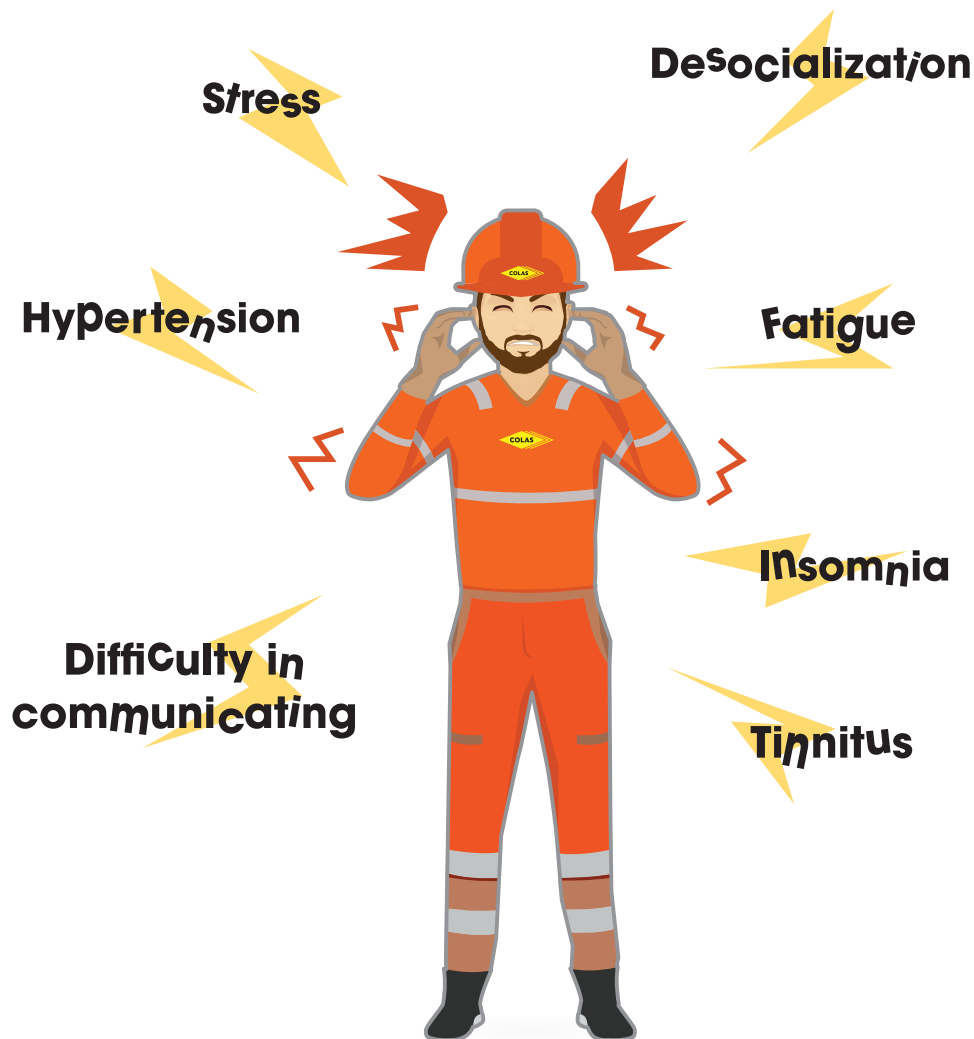


**Hearing loss is final and irreversible, and can not be cured!**

Noise only affects  
our ears

**#2** Popular  
belief

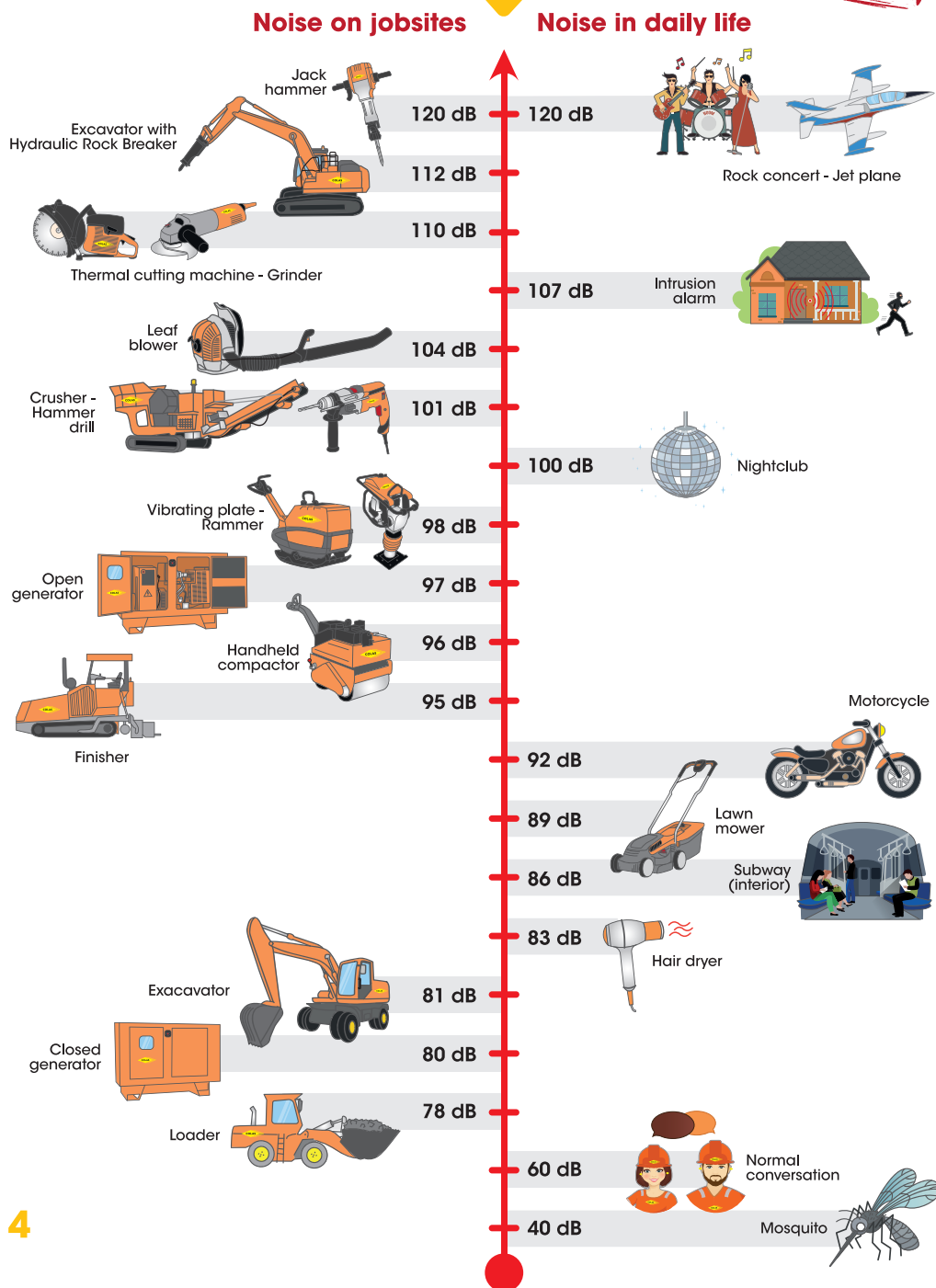
**FALSE**



Any of the above can also  
be caused by noise.

# Popular belief #3 • Jobsites aren't that noisy

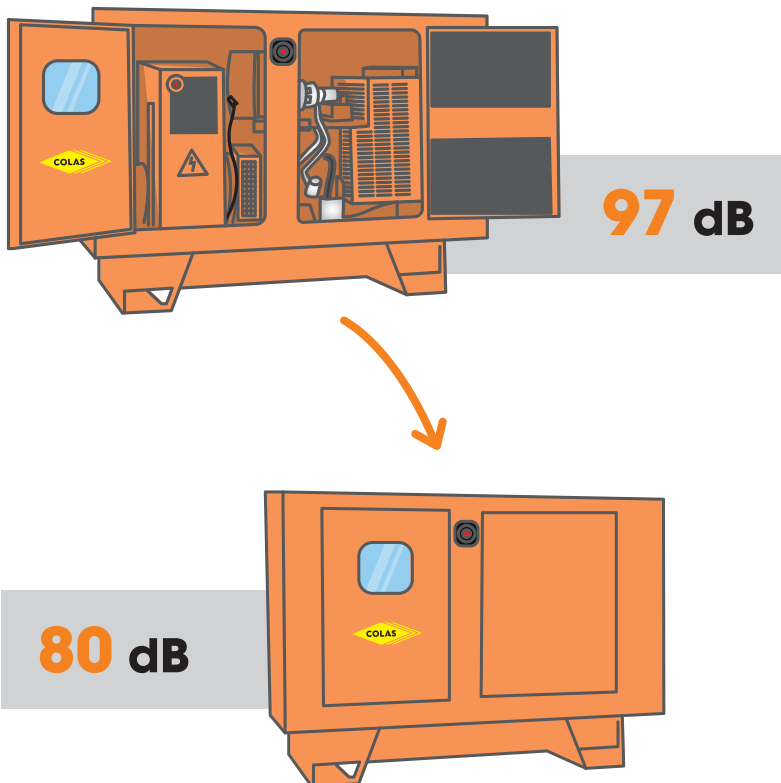
**FALSE**





## Following best practices in collective protection

For example, by closing the doors on a generator, noise levels drop from **97 to 80 decibels!**

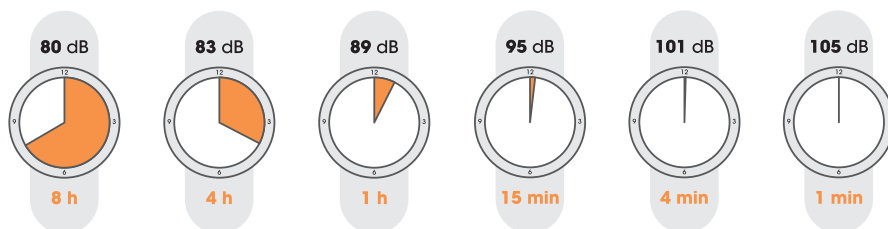


# Popular belief #4 • Intensity is the only thing that makes noise dangerous

**FALSE**

It is the **combination of intensity and exposure time** that is dangerous for hearing.

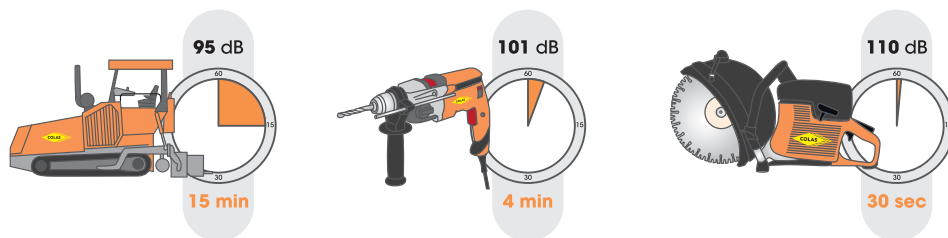
For example, **being exposed for 8 hours to an average of 80 decibels is equivalent to a 4-minute exposure to 101 decibels.**



Noise becomes harmful to our health **after an 8-hour exposure to 80 dB.**

The table on the right shows the **equivalence of noise exposure** with an example of a daily source of noise for each of the indicated sound levels.

**We use up our maximum daily recommended noise dose** if we don't use hearing protection for:



For the remainder of the day, **we must not be exposed to any noise at all**, which is impossible!

**Wear hearing protection at all times to preserve and protect your hearing.**

## Equivalence of noise exposure

110 dB (A) ▶ 30 sec

Thermal cutting machine



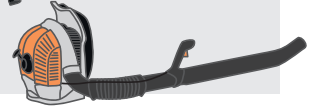
107 dB (A) ▶ 1 min



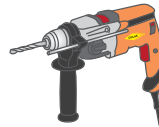
Intrusion alarm

104 dB (A) ▶ 2 min

Leaf blower



101 dB (A) ▶ 4 min



Hammer drill

98 dB (A) ▶ 7 min

Rammer



95 dB (A) ▶ 15 min



Finisher

92 dB (A) ▶ 30 min

Motorbike



89 dB (A) ▶ 1 h

Lawn mower



86 dB (A) ▶ 2 h

Subway (interior)



83 dB (A) ▶ 4 h

Hair dryer



80 dB (A) ▶ 8 h

## Popular belief #5

If I protect my hearing part of the day, that's good enough

**FALSE**

**We must be wearing hearing protection before we even get close to the source of noise!**

As soon as we arrive in a work area, **we are exposed to noise**, even if we aren't working with noisy tools or operating equipment.

## Popular belief #6

Noises add up

**FALSE**



As part of a logarithmic scale, **decibels do not add up linearly**. A **3-decibel** increase means that **a sound has doubled in intensity**.

**FALSE**

## Popular belief #7

Double protection means double attenuation



Hearing protection:  
**- 25 dB**



Noise-cancelling hardhat:  
**- 35 dB**



Double protection:  
**- 37 dB**

Double protection can be useful in some cases, when the noise level is higher than 115 decibels.

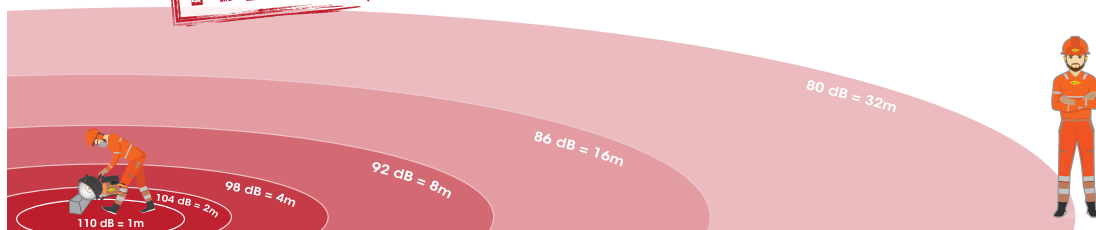
However, it only provides a slight extra attenuation and completely isolates the user.

**Double protection must only be used occasionally and in a secure area.**

Only the operator needs protection

## #8 Popular belief

**FALSE**



A sound level **decreases by 6 decibels each time the distance from the source doubles**. For example, with the **disc cutter that emits 110 dB at 1 meter**, you would need to be **32 meters** away to find a sound level of 80 decibels.

# NOTI

# TES



A series of horizontal dotted lines spanning the width of the page, intended for writing or drawing.

# GROUP RULE

Hearing  
protection is  
mandatory on  
all sites.



**safety  
attitude**

**COLAS**