

CO-Gas Safety Unintentional Carbon Monoxide Poisoning Case Study

TANYA & PAUL GARSTANG, Survived in 2020



An example of a grill cabin

Fuel: BBQ charcoal

Appliance & Location: Brand new grill cabin in their garden

Notes by CO-Gas Safety: Paul and Tanya contacted CO-Gas Safety to ask for help when they experienced elevated levels of CO inside their new BBQ hut. The building was marketed as a grill cabin and comes with a central BBQ grill for several people to sit around but soon became an obvious danger. CO-Gas Safety had difficulty finding an expert with the correct qualifications to carry out a legally admissible test in the hut. The Garstangs struggled to receive any useful response from either the retailer or the manufacturer regarding their concerns.

In the summer of 2020 we purchased a grill cabin from a local garden nursery. It cost around £5,000 so was a substantial investment and we assumed that the specialist European manufacturer would provide a quality product, and that the retailer we purchased it from would act responsibly and sell a safe, quality product.

Discovering the CO problem

On separate occasions that summer both of us were ill after using the cabin. We experienced vomiting and nausea, but initially did not associate it with anything to do with the cabin. It was only after we both subsequently became ill that we thought this must be relating to something other than general illness. After looking at some online comments on a Facebook Group – Grillkota Owners Club – about carbon monoxide poisoning in BBQ grill huts, we purchased a battery-operated carbon monoxide monitor and saw that the digital CO readings rose over 200ppm when the grill was in use. One reading was as high as 272ppm (a domestic carbon monoxide alarm can trigger at just 50ppm if that level is sustained for 8 hours, or after just 10 minutes if the level is as high as 200ppm). Most alarm manufacturers state that a level of 400ppm can be life threatening within 3 hours, so this was a huge concern to us!

Asking for help

We approached the retailer and asked them for advice. They admitted that they had not heard of any problem with the huts before and that they knew little about the product or any dangers. They suggested that we lower the chimney a little, and try burning other fuels than the charcoal that they had originally told us was a suitable fuel. They were unwilling to come out to the cabin to see if they could ascertain what the problem was.

We realised that we didn't even have any operating instructions for the cabin, which we then managed to obtain from the manufacturer when we contacted them about the problem after the retailer refused to get involved. It stated that the chimney height guideline was actually even lower than the retailer's new suggestion and that charcoal should never have been used. It seemed no-one was sure about exactly what fuel should be used and we were unable to get a definitive answer.

Too late for medical proof

The retailer told us that we may not have been ill as a result of using the cabin and that we should have had this confirmed by a doctor before making a complaint. We now know that even if we had gone to a doctor, the level of COHb (carboxyhaemoglobin, an indicator of CO inhalation) in a blood

test would have been greatly reduced by the time we convinced someone to take a sample and test it; it's a common problem with CO poisoning diagnosis as the toxin dissipates once the victim breathes uncontaminated air. Now that we knew the risk, we certainly weren't going to intentionally poison ourselves again in the cabin on purpose just to confirm the danger – the monitor was already telling us the levels were dangerous.

Finding a solution

We tried lowering the chimney to the height in the instructions, and using different fuels, but the CO was still accumulating. We failed to get any kind of solution from the retailer, the manufacturer and even Trading Standards, who said they would be unable to get involved unless someone had actually died and we believed CO to be the reason. We were absolutely astounded at the retailer's lack of willingness to get to the bottom of this problem. Again, lots of conflicting information was available online, more through people's word of mouth but we had seen some cabin owners report that a chimney fan could eradicate the issue. We approached the retailer and asked them to look into this, which again they flatly refused to do.

We also had a HETAS Engineer take a look at the cabin, who gave their professional opinion that the cabin did indeed require some form of chimney fan and deemed the cabin was totally unsafe and unfit for use.

Resolution for us...

After 12 months of not being able or willing to use the cabin, we finally received a refund of the purchase price from our credit card company. The cabin at this moment in time was totally unusable.

After the settlement we decided to purchase and try out a chimney fan at a cost of approximately £400, and had it installed in the hut (cost around £100). This immediately solved the issue at last and we are able to use the cabin successfully with the CO monitor in place. All types of fuel are able to be used and the monitor never rises above zero when the fan is functioning (until we switch the fan off and leave the cabin).

But buyers beware!

We are so relieved that this simple addition has made the hut safe for us to use, and we will never let it be used without a CO alarm to EN50291 and with good batteries in situ. I believe from other hut owners that responsible retailers do sell the huts with a CO alarm included, and we fail to comprehend how any retailer does not provide at the very least the CO monitor, or the fan as standard, as it is clearly essential to using these units safely, and that no-one gave us a definitive answer on whether installing a fan would alleviate our problem. Everyone seemed to want to avoid the phrase carbon monoxide!