

The Los Angeles Silhouette Club

Safe Handling Of Lead When Casting *And* Tumbling Brass

By: Glen E. Fryxell

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Question from a reader: *I'm interested in casting lead bullets. My concern is lead poisoning and my 2 1/2 year old son. Of course I'll do all of this out in the garage, but will the smoke and vapor accumulate on the walls to the point where simply touching them could cause problems? How old can a child be before exposure isn't quite as harmful? I'm willing to put casting off for a few years if that's what it takes.*

As a Ph.D. chemist involved in the environmental chemistry of heavy metals and heavy metal toxicology, perhaps I can add a few helpful comments here. First off, you are right to be concerned about your children. Lead is considerably more dangerous to kids than it is to adults. A healthy 200 lb man can carry a lead burden (with no symptoms) that would cause severe mental retardation in a 5-year old. This is because one of the main effects that lead has is on the developmental biochemistry of the brain and spine. Once you've grown up, lead can't enter that particular pathway anymore. There are still other toxicity mechanisms to be concerned about, but the neurological development of children is easily the most serious. If you want to learn more about lead and its effects on kids, the CDC has an excellent report that they will send you free of charge from their website (I recommend this report to anyone who shoots cast bullets -- notice I did NOT say "bullet casters").

As to your concern about fumes and vapors, my opinion is that with the fan you describe, that is the least of your worries. I cast in a lab-grade fume hood in my garage that should provide similar ventilation to what you describe. I have been actively casting bullets for about 10 years. My wife has her blood chemistry evaluated quarterly as a result of having MS. They can't find ANY lead in her blood. Not just acceptably low levels, they can't find ANY. So, with adequate ventilation, general lead vapor contamination can be easily controlled or eliminated.

I would be much more concerned about general "lead housekeeping", especially with small, teething age children around. Discovery of an interesting new object seems reason enough for a child to put that object in their mouth and chew on it (this is why we got rid of lead-based paints). Ingots, stray sprues and shiny new cast bullets are all potential teething rings, and should be kept away from children.

Don't think that just because you aren't casting your own bullets that you don't run any risk from lead poisoning. T'aint necessarily so! Simply handling/loading commercial cast bullets followed by eating, drinking or smoking can still put lead into your body. As mentioned above, **WASH YOUR HANDS BEFORE EATING!** Also, shooting on an inadequately ventilated indoor range can give you a substantial lead dose from the airborne lead oxide aerosol from the primers.

I know of at least two individuals (each of whom haven't cast a bullet in many years)

who have suffered from severe lead levels as a result of shooting on an inadequately ventilated indoor range. One had to go through over a year's worth of IV chelation therapy and the other should, but is too stubborn (or too afraid of needles).

I have been an active bullet caster for about 10 years now and my bullet casting has brought me countless hours of pleasure, education and satisfaction. It's affordability has allowed me to practice enough to become an Expert class bullseye shooter and allowed me to shoot odd-ball calibers that commercial jacketed bullets weren't available for. It is a wonderful hobby, but like any other aspect of guns, you have to THINK about what you are doing and how you are doing it. Just like handloading, bullet-casting is only as safe or as dangerous as you make it.

Question from a reader: *I've often wondered about the dust from my brass tumbler. It seems like all the residue would collect in the media and would be harmful. Is that in fact a danger?*

I have often wondered about that myself. I have no hard data on that one way or the other, but I believe that lead contamination of tumbling media is inevitable due to residues left in the cases from the lead styphnate priming compound.

BUT, I haven't lost any sleep over it and here's why. Seven or eight years ago I was visiting a friend of mine who is a commercial reloader; Mike processes more brass in a day than most of us do in a year (for brass tumblers he has 4 cement mixers going on his back porch at all times). I noticed that after he put his brass in the mixers, he would add water. I asked him about this, and his response was "Ask any machinist, when you want to polish metal, do they polish it wet or dry? They polish it wet." Water also helps to keep down the air born particulates (ask any road crew, wheat farmer or baseball groundskeeper). The lead is still there in my tumbling media, it's just no longer easily inhaled. Now before you go hosing down your tumbler, let me emphasize that there is such a thing as too much of a good thing! For an average reloader's tumbler (12-14" in diameter) that is properly filled with media, all you need is about a shot-glass full of water, and no more than a 1/4 cup (more will just make your media clump-up badly, make everything soggy, get caked-up media stuck inside your cases and make the tumbler work harder to clean less efficiently). Add the water when the tumbler is going so that it gets dispersed evenly throughout the media. This is an electrical device and there are potential shock hazards involved, so make sure the water goes into the tumbler bowl and not on the motor or floor. Your brass will come out cleaner, come clean faster and airborne dust will be significantly reduced.

- Glen E. Fryxell

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Always consult recognized reloading manuals.

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