



B194 A Review of Gunshot Residue (GSR) Evidence in Suicide Cases

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After attending this presentation, attendees will understand the role of GSR as evidence in the investigation of suicide cases. This will occur through a review of suicide investigations, including both medical-legal and law enforcement agency settings.

This presentation will impact the forensic science community by reviewing the application of GSR as a form of evidence in the investigation of suicides.

Suicide investigations involving firearms, both witnessed and unattended, can prove difficult for investigators and medical examiners. Several factors can complicate the investigation, including lifesaving efforts and disorganized crime scenes, emotions and demands of loved ones, and civil proceedings such as life insurance considerations. It is key to note that the presence or absence of GSR on the hands of a suicide victim will not resolve the manner of death.

GSR analysis is intended to provide information to an investigation by associating an individual with the discharge of a firearm; it is not beneficial in crime scene reconstruction. GSR cannot conclusively identify a shooter. GSR on a suicide victim's hands may indicate antemortem activities, such as firing a weapon, being in close proximity to a firearm during discharge of a weapon, or handling a firearm, a fired cartridge, or some other surface bearing GSR. A negative GSR result is not evidence of not firing a weapon and a positive test for GSR cannot confirm a suicide. GSR testing is most probative in cases in which an individual claims to have not been in the proximity of a firearm during discharge — something a suicide victim cannot claim. Individuals are not expected to have GSR during everyday activities. For these reasons, GSR findings often do not provide additional details for the investigation of a suicide. Investigators seeking evidence of a suicide must consider GSR within these parameters. With these factors in mind, some laboratories elect not to analyze GSR from suicide victims.

This presentation will provide a review of GSR cases between 2010 and 2015. This review can then be used to assist laboratories in establishing acceptance and analysis criteria as well as to provide information for the significance of the evidence when presented in a court of law. Finally, advantages and disadvantages of performing GSR analysis on suicide cases will be presented.

In conclusion, this presentation will provide a review of the analysis of gunshot residue evidence on cases investigated as suicide between 2010 and 2015.

GSR, Suicides, Gunshot Residue