



General Classification of Various Blood Stain Patterns

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DESCRIPTION

One must first comprehend the fundamental characteristics of blood in order to comprehend how analysts interpret bloodstains. Solids and liquids can both be found in blood. When blood enters the body, it is in a liquid state, and when blood leaves the body, it is still in a liquid state. But it doesn't stay liquid for very long, as anyone who has ever had a cut or a scrape knows. With the exception of those who have hemophilia, blood starts to clot within a few minutes, forming a dark, shiny gel-like substance that solidifies over time. Blood clots in bloodstains may be a sign that the attack lasted a while or that the victim was still bleeding after the injury occurred. Depending on the type of injury sustained, there are many different ways that blood can leave the body. It can simply ooze out of wounds or flow, drip, spray, spurt, or gush.

Various stains

Projected or impact stains, transfer stains, and passive stains are the three categories into which bloodstains can be divided. Passive stains, which typically result from gravity acting on an injured body, include drops, flows, and pools. Transfer stains are brought on by objects contacting already-existing bloodstains and leaving behind wipes, swipes, or pattern transfers, like a bloody shoe print or a smear from dragging a body. Blood those projects through the air is what causes impact stains, which are most often observed as spatter but may also include gushes, splashes, and arterial spurts. Gunshot spatter is made up of both the back and forward spatter from the entrance and exit wounds. Gunshot

spatter varies depending on the gun's caliber, the victim's location in relation to walls, floors, and objects, whether the bullet exits the body, how close the victim is to the gun, and how the victim is struck.

Typically, back spatter has more drops and is larger than forward spatter, which is typically a fine mist. Blood is cast off when an object is swung in an arc and hits nearby surfaces. When an attacker swings the bloodied object back before delivering another blow, this happens. The pattern of the spatter provides analysts with information about the object's direction of impact.

The least number of blows that were struck can also be determined by counting the arcs. The blood spout that occurs when a significant artery is severed is referred to as "arterial spray." The heart's pumping action propels the blood out of the ruptured blood vessel, where it frequently forms an arcing pattern made up of big, individual stains. This pattern changes with each heartbeat. Expiated spatter is typically caused by air from the lungs being expelled through the mouth or nose after blood from an internal injury has mixed with it. It can also be brought on by an airway or lung injury. Due to the force exerted by the lungs expelling air from the body, exhaled spatter frequently takes the form of a very fine mist. The blood drops in this kind of spatter frequently contain tiny air bubbles. Some bloodstains are latent, which means that the unaided eye cannot see them. To locate and capture latent bloodstains on camera, investigators can use chemical reagents like Luminol. When sprayed on blood, Luminol reacts with the iron in the hemoglobin to produce a vivid blue luminescent glow.

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