



BLOOD SPLATTER

T R I G G E R

W A R N I N G

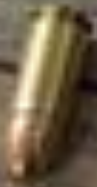
E X P L I C I T C O N T E N T



A blood splatter pattern provides information about:

- **the truthfulness of an account by a witness or a suspect**
- **the origin of the blood**
- **the angle and velocity of impact**
- **the type of weapon used**

**What
different
types of
blood
evidence
can be
collected?**



b L O O d

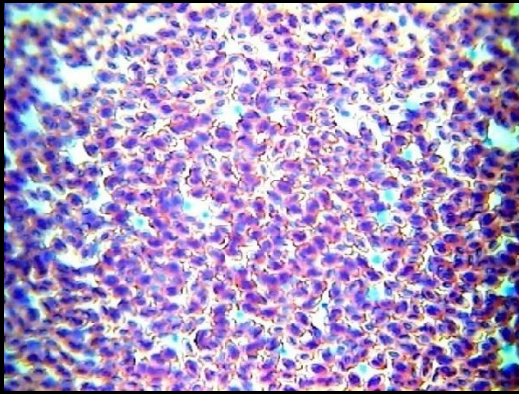
e V i d e n C e

Blood samples - Can be analyzed to determine blood type and DNA, which can be matched to possible suspects.

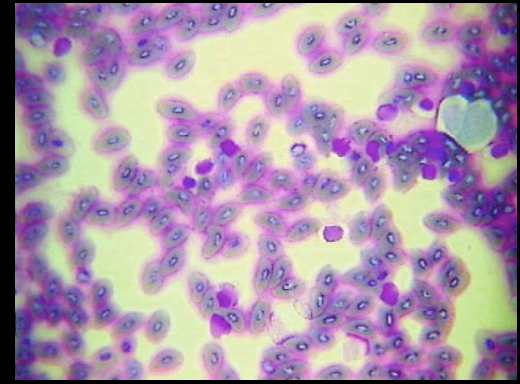
Blood droplets - Can be analyzed to give clues to the location of a crime, movement of a victim, and type of weapon.

Blood spatter - Can be analyzed to determine patterns that give investigators clues to how a crime might have happened.

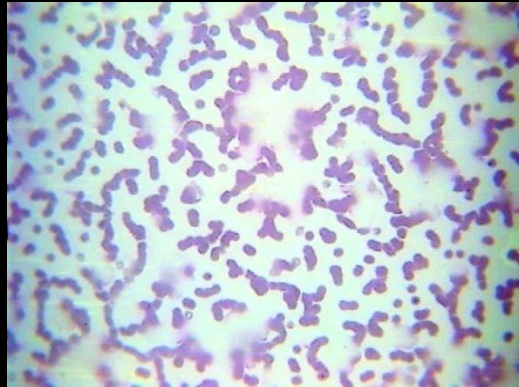
MICROSCOPIC VIEWS



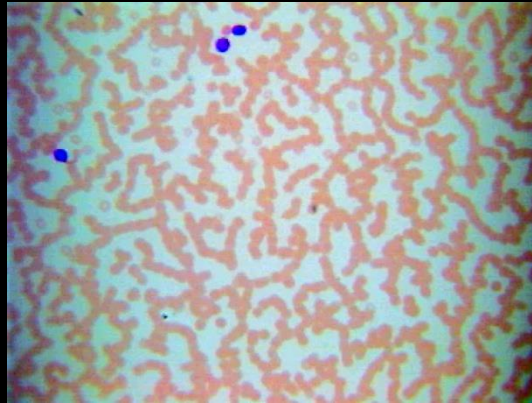
Bird Blood



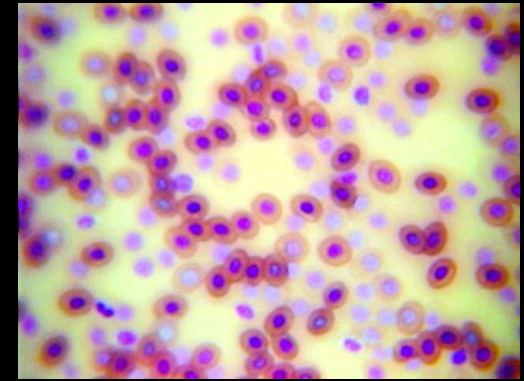
Fish Blood



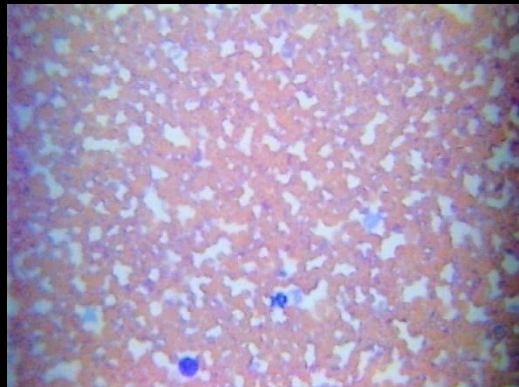
Cat Blood



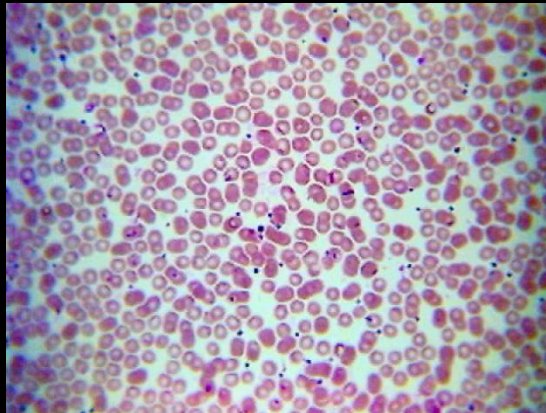
Horse Blood



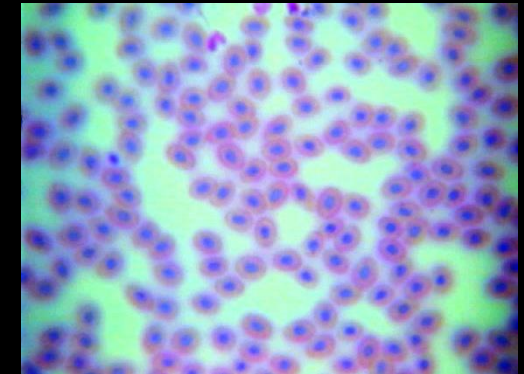
Frog Blood



Dog Blood



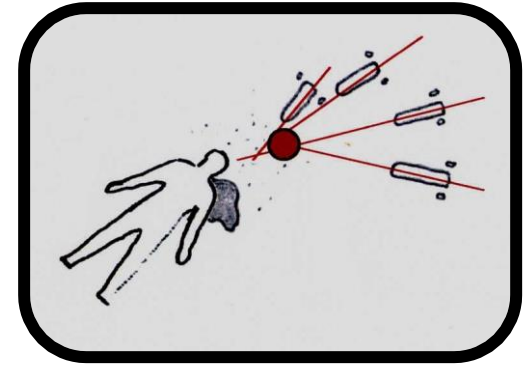
Human Blood



Snake Blood

b L O O d

S P L a t t e r



- **1939-splatter patterns first analyzed**
- **Blood may splatter when a wound is inflicted**
- **Blood splatter pattern—a grouping of blood stains**
- **Patterns help to reconstruct the events surrounding a shooting, stabbing or beating.**

BPA

Blood Pattern Analysis

What Do Bloodstain Experts Find Out?



The type of weapon used



The direction of travel of a victim or suspect



Trajectory of a projectile



Number of wounds a victim may have suffered



How events unfolded during a violent crime

WHAT BPA CAN DETERMINE

fig. 1



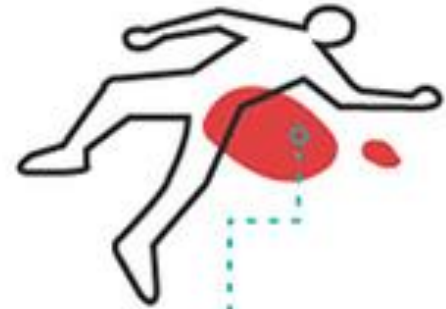
Date and time of crime

fig. 2



Type and velocity of weapon

fig. 3



Movements/position of those involved

fig. 4



If the assailant was left or right handed

fig. 5



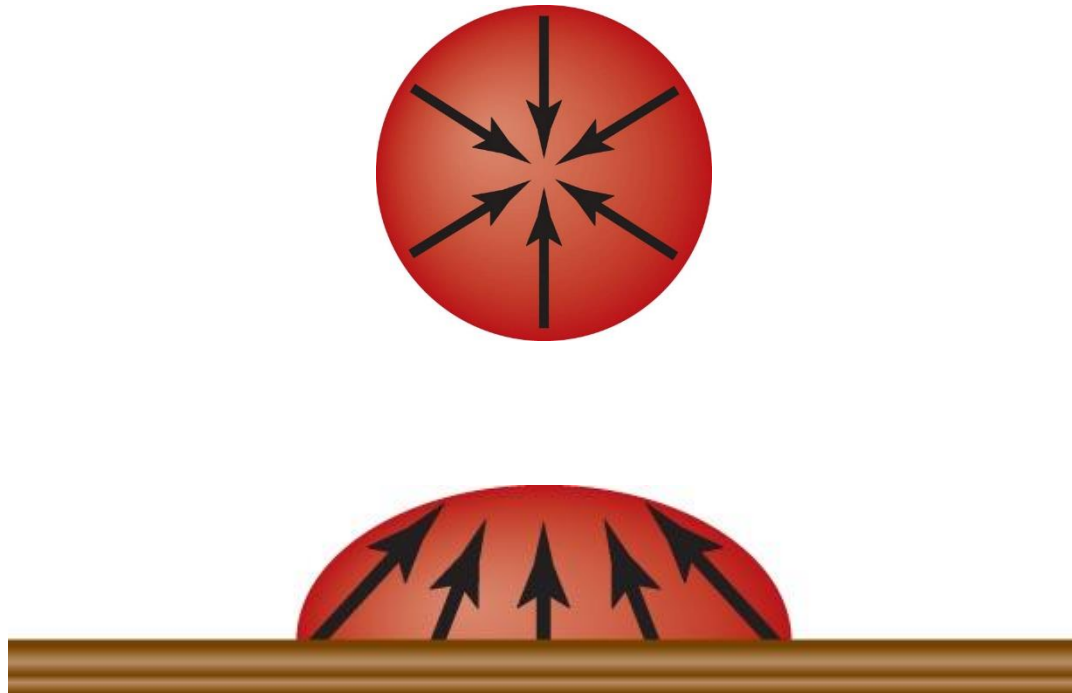
Types of injuries dealt

fig. 6



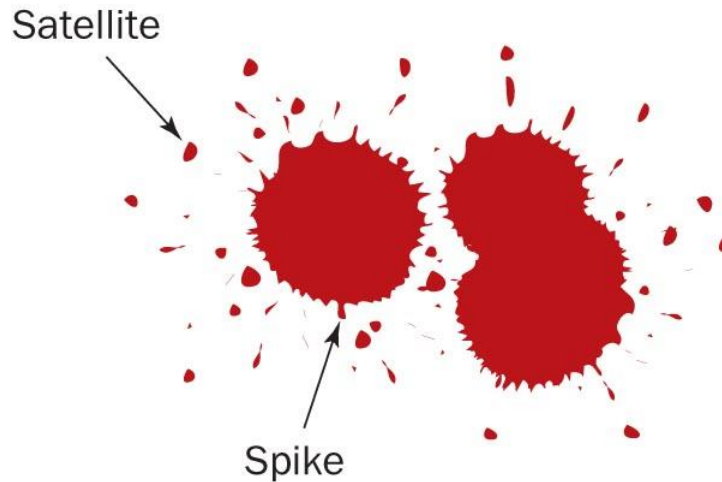
Whether death was immediate

Natural cohesiveness of blood



Satellite Droplets

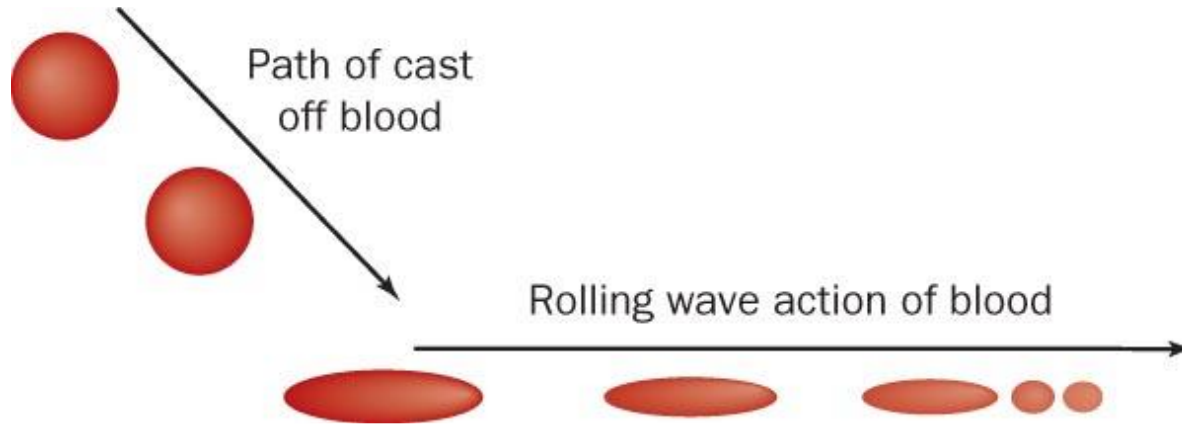
When blood falls from a height, or at a high velocity, it overcomes its natural cohesiveness, and separates from the main droplet



Spiking Patterns

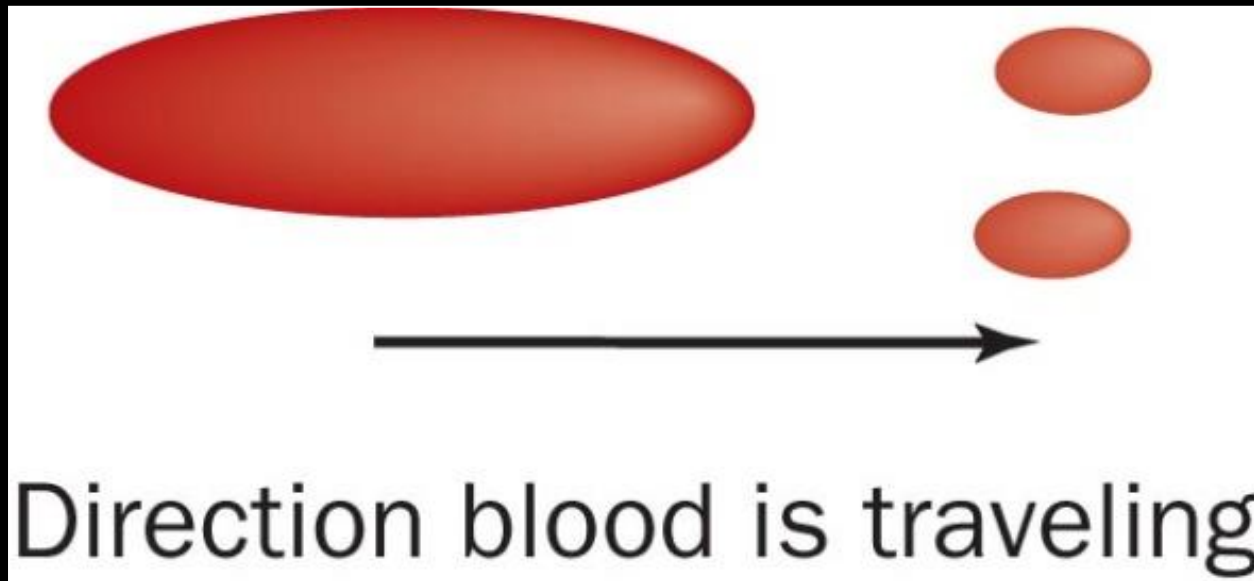
Form around the droplet edges when blood falls onto a less-than-smooth surface

direction



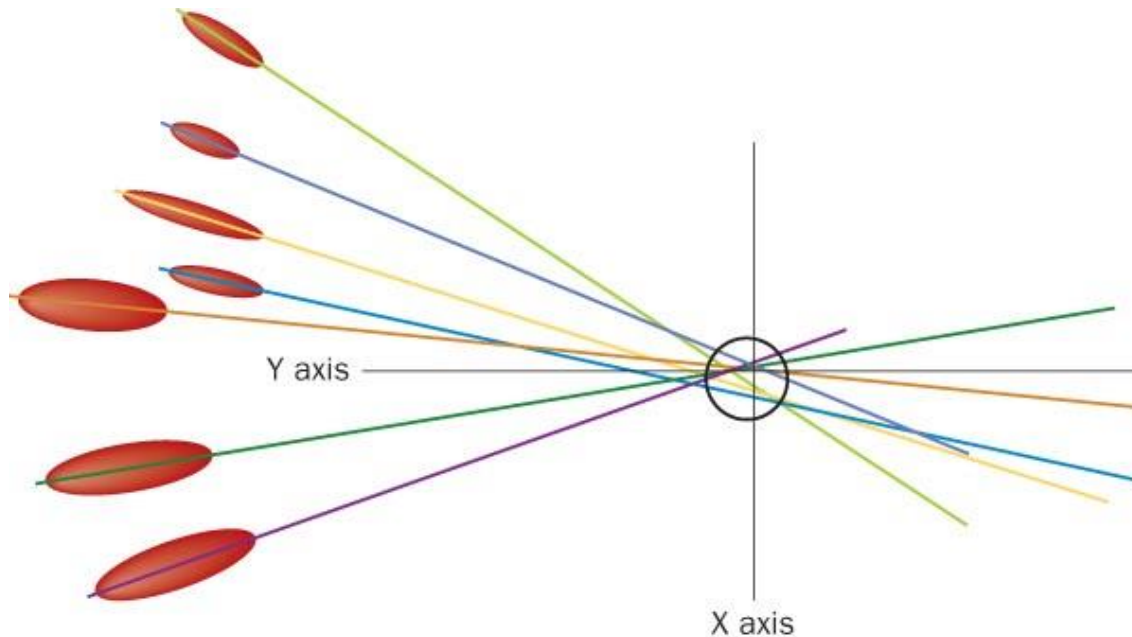
The shape of an individual drop of blood provides clues to the direction from where the blood originated.

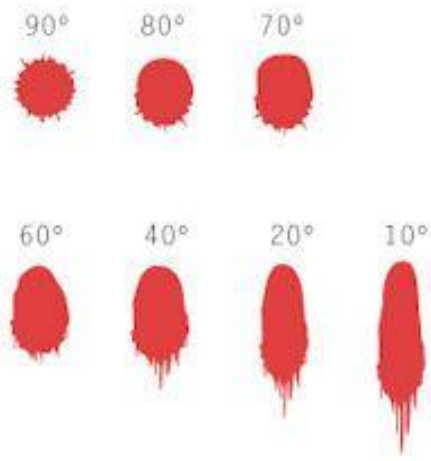
How will the point of impact compare with the rest of a blood pattern?



LINES OF CONVERGENCE

two or more blood splatters can pinpoint the location of the blood source





Patterns can help investigators determine the **type of weapon** used

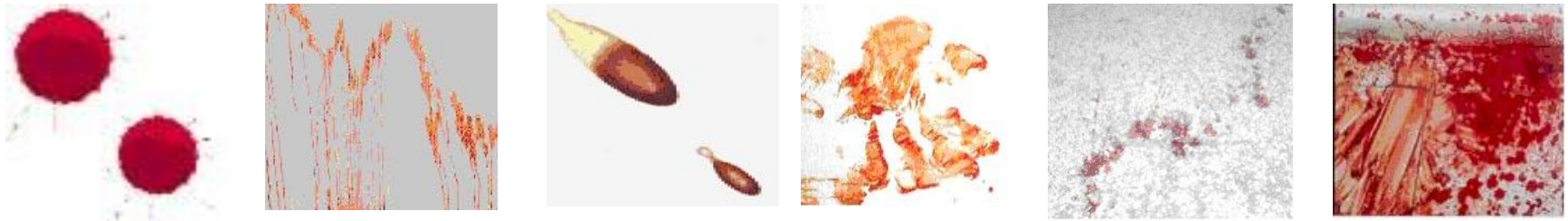
- What kind of a pattern is produced by a gun shot?
- What kind of a pattern is produced by a hammer blow?

6

* POSTER *

Patterns

PROJECT



- a) Passive drops
- b) Arterial gushes
- c) Splashes
- d) Smears
- e) Trails
- f) Pools

INCLUDE:

- ✓ Title
- ✓ Definition
- ✓ Example
- ✓ Scenario

CRIME SCENE INVESTIGATION

- 1. Search for blood evidence**
- 2. Answer...**
 - a. Is the evidence blood?**
 - b. Is the blood human?**
 - c. What is the blood type?**
- 3. Blood Pattern Analysis**
 - a. Height**
 - b. Speed**
 - c. Angle**
- 4. Interpret the findings:**
 - a. Does the blood type match a suspect's blood?**
 - b. If not, exclude that suspect**
 - c. If yes, decide if DNA profiling is necessary.**