

A vertical graphic on the left side of the slide showing a DNA double helix. The two strands are red, and the base pairs are represented by horizontal bars in cyan and green. A diamond-shaped inset with a halftone pattern is overlaid on the helix, containing the word "DNA" in white.

DNA

Evidence Identification, Collection & Preservation

For Law Enforcement

COPS

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A diamond-shaped logo with a grid pattern and the word "DNA" inside.

Presidential Initiative

March 11, 2003

- “Initiative to Advance Justice Through DNA Technology”
- 6 different DNA issues to include training for law enforcement officers
- The result is critical pieces of evidence will be collected, fewer cases will be jeopardized by mishandling and more cases could be solved.

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A diamond-shaped logo with a grey stippled background and the word "DNA" in white capital letters.

DNA

Purpose

- Utilize available technologies
- Improve conviction rates
- Exonerate the innocent

The logo for the Community Oriented Policing Services (COPS) program, featuring the word "COPS" in a bold, blue, sans-serif font with a white star on the right side.

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DNA Evidence and Bio-safety



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DNA

Universal Precautions

- Treat every item as though it were contaminated with blood or other body fluids
- Use Personal Protective Equipment
 - Face mask/shields
 - Safety glasses
 - Gloves
 - Disposable cover-alls
 - Shoe covers



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DNA

Contamination Practices

- Educating crime scene personnel
 - “*touch evidence*”
 - “*clean*” practices
- If possible, use disposable instruments to pick up items
- Otherwise, clean items with 10% bleach & alcohol between samples
- Try not to touch the area you want tested!



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Contamination Practices

- Use of cell phones in the crime scene may result in inadvertent contamination of an item if gloves have not been changed
- Change gloves with **EVERY** item!
- No smoking **IN** the crime scene

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A logo consisting of a red diamond shape with a white border, containing the letters 'DNA' in white. The diamond is set against a black background with a white grid pattern.

DNA

The Crime Scene

Proper Collection,
Packaging & Preservation
of **DNA** Evidence

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Securing the Scene

Identify focal point of scene and extend outward to establish scene boundaries



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A logo featuring the word "DNA" in white capital letters inside a dark red diamond shape, which is set against a grey grid background. This logo is positioned in the top-left corner of the slide.

DNA

Securing the Scene

- Limit number of people with access to scene
- Keep log of all personnel that had access to the scene – for elimination samples

The logo for the Community Oriented Policing Services (COPS) program. It features the word "COPS" in a large, bold, blue sans-serif font. A white five-pointed star is positioned to the right of the letter "S".

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A diamond-shaped logo with a grey stippled background and the word "DNA" in white, serif font.

DNA

A large red octagonal sign with a white border and the word "STOP!" in white, bold, sans-serif font.

STOP!

Before entering this crime scene, be aware that your presence may subject you to future cross contamination and elimination procedures including:

- A full DNA profile
- Plucked pubic hair
- Plucked head hair
- Plucked body hair
- Skin cell samples
- Buccal swabbing
- Fingerprints

A full written report as to the need for your services at this scene may also be required.

ENTER AT YOUR OWN RISK

LYNN PEAVEY COMPANY
www.lynnpeavey.com

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A logo consisting of a red diamond shape with a white border, containing the letters 'DNA' in white. The diamond is set against a black background with a white grid pattern.

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Documentation

- Essential to establish:
 - Location
 - Condition
 - Chain of custody for each item collected

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Types of Documentation

- Notes
- Diagrams
- Photographs
- Video and audio



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A diamond-shaped logo with a grid pattern and the word "DNA" in white capital letters.

Potential Sources of DNA Evidence

- 
- A vertical graphic of a DNA double helix with red ribbons and green and blue horizontal rungs.
- Clothing
 - Hat/Cap sweatbands
 - Eyeglasses
 - Earrings
 - Chewing gum
 - Toothpicks
 - Toothbrushes
 - Bite/Lick/Suck marks
 - Licked stamps
 - Envelopes
 - Food
 - Bottles or cans
 - Water bottles
 - Gloves
 - Watches
 - Condoms
 - Used tissues
 - Handkerchiefs
 - Cigarette butts

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DNA

Common DNA Sources

Blood

- Victim or Suspect's body
- Weapons
- Clothing
- Other items at scene or transported away from scene



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DNA

Common DNA Sources

Semen

- Victim/Suspect's body
- Clothing
- Towels
- Bedding
- Condoms/devices



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DNA

Common DNA Sources

Vaginal Fluid

- Suspect's pubic area
- Suspect's underpants
- Suspect's fingers
- Condoms
- "Devices"



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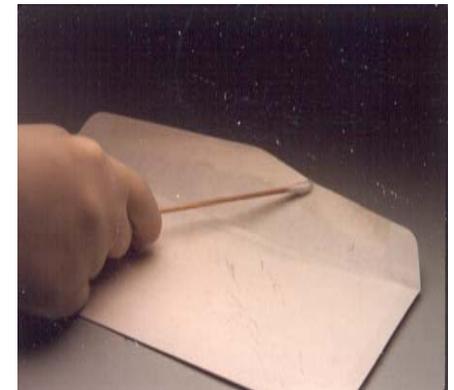
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DNA

Common DNA Sources

Saliva

- Victim or Suspect's body
- Underpants
- Expectorant
- Bitemarks
- See "Oral" evidence



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Common DNA Sources

Oral

- Items coming in contact with someone's mouth
- Items left behind by V or S
- Careful!! Consider the probative nature of time, location, and mobility!!

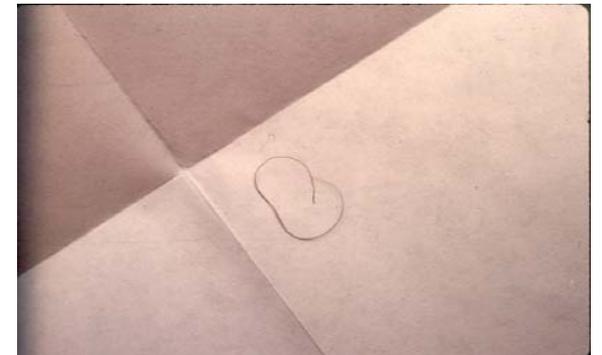


DNA

Common DNA Sources

Hairs

- Individual's pubic area
- Clothing
- Crime scene



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Recognition of Hairs/Fibers

- Consider the probative nature of hairs/fibers
 - Domestic situations
 - Boyfriend-girlfriend
- Use oblique lighting



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DNA Sources

Urine and Feces

- Victim and Suspect underpants (sodomy)
- B&E scenes
- Vandalism scenes



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DNA

DNA Sources

Touch



- Casual contact between a person's hand(s) and an item
- GLOVES??
- Intentional use, unintentional DNA loss
- MIXTURES!!

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Caution Regarding “Touch” DNA

- Carefully weigh the value of a possible latent print against a possible DNA profile
- “Touch” DNA is not meant to replace latent prints!

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DNA

DNA Sources

Wearer



Items that are:

- In contact with a person's body
- Items left behind by V to "mark" location
- Items discarded by S (inadvertently or not)
- Careful!! Consider the probative nature of time, location, and mobility!!

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Knowledge into Practice

- Look at the following crime scene photos and identify the following:
 - Salivary DNA sources
 - Probative “touch” DNA sources
 - Probative “wearer” DNA sources

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