

# MEDICAL MARKERS OF ELDER ABUSE

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CENTER OF EXCELLENCE  
ON ELDER ABUSE AND NEGLECT  

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# Overview of today's talk

- ⦿ Review of normal, common aging
- ⦿ Relationship between aging and abuse
- ⦿ Medical markers
  - Bruising
  - Strangulation
  - Fractures
  - Burns
  - Pressure sores
  - Cultural practices that resemble physical abuse
- ⦿ Medications and mistreatment

# Age-Related Changes

- Normal changes of aging
  - Multiple co-morbidities
- Medication effects
  - Cognitive impairment

# An Organ Recital



# Normal & Common Changes

1) Renal: decrease in creatinine clearance

2) Integument (skin)

- thinner epidermis
- capillary fragility
- Less elasticity

3) Sensory system

- Presbycusis (hearing loss)
- slower reaction time
- macular degeneration, cataracts

# Normal & Common Changes

## 4) Musculoskeletal

- Sarcopenia (loss of skeletal mass)
- osteopenia/osteoporosis

## 5) Cardiovascular

- orthostatic hypotension (dizziness upon standing)
- congestive heart failure

## 6) Function

- gait/falls
- ADLs

# Effects of Decrease in Reserve

- ⦿ Greater susceptibility to illness
- ⦿ More difficulty in recovering from illness
- ⦿ Sensitivity to side effects of medication
- ⦿ **Vulnerability to abuse**

# Age-related changes make older adults more vulnerable to abuse

- ⦿ Difficulty defending oneself
- ⦿ More likely to get injured
- ⦿ May require more care
  - Cognitive
  - Physical



# Age-related changes may mask or mimic signs of abuse

- ⦿ Bruises
- ⦿ Fractures
- ⦿ Pressure sores



# Assessment

- ⦿ History
- ⦿ Physical
- ⦿ Mental status exam
- ⦿ Laboratory



# Assessment

- ⦿ History
- ⦿ **Physical**
- ⦿ Mental status exam
- ⦿ **Laboratory**



# Red Flags: Possible Mistreatment

- ⦿ Implausible/vague explanations
- ⦿ Delay in seeking care
- ⦿ Unexplained injuries - past or present
- ⦿ Inconsistent stories
- ⦿ Sudden change in behavior

# The importance of context

# Contextual Issues

- ⦿ Circumstances/Events leading up to the alleged abuse
- ⦿ Delay in seeking care
- ⦿ Lack of concern on the part of the caregiver
- ⦿ Medical history
- ⦿ Interactions between patient and caregiver
- ⦿ Cognitive capacity
- ⦿ Cognitive/behavioral changes
- ⦿ History of medical care
  - Preferences
  - Follow up



# Observations

- ⦿ Interaction of the alleged victim and perpetrator
- ⦿ Behavioral indicators of state of mind
  - Withdrawal
  - Fear
  - Confusion

# Clues on Physical Exam: Neglect

- ⦿ Pressure sores
- ⦿ Poor hygiene
- ⦿ Unkempt appearance
- ⦿ Poor foot care
- ⦿ Low weight
- ⦿ Dehydration
- ⦿ Body language of patient



# Clues on Exam: Physical Abuse

## Types of Injuries

- Bruises
- Fractures
- Burns

## What to look for

- Location
- Hx consistent with exam?
- Old injuries
- Delay in seeking care

- Bruising results from blunt forces:

OR

Either a body  
part hits  
something  
harder than itself

A harder object  
hits a body

# Bruises

- Most common
- Hard to tell what's abuse and what's not



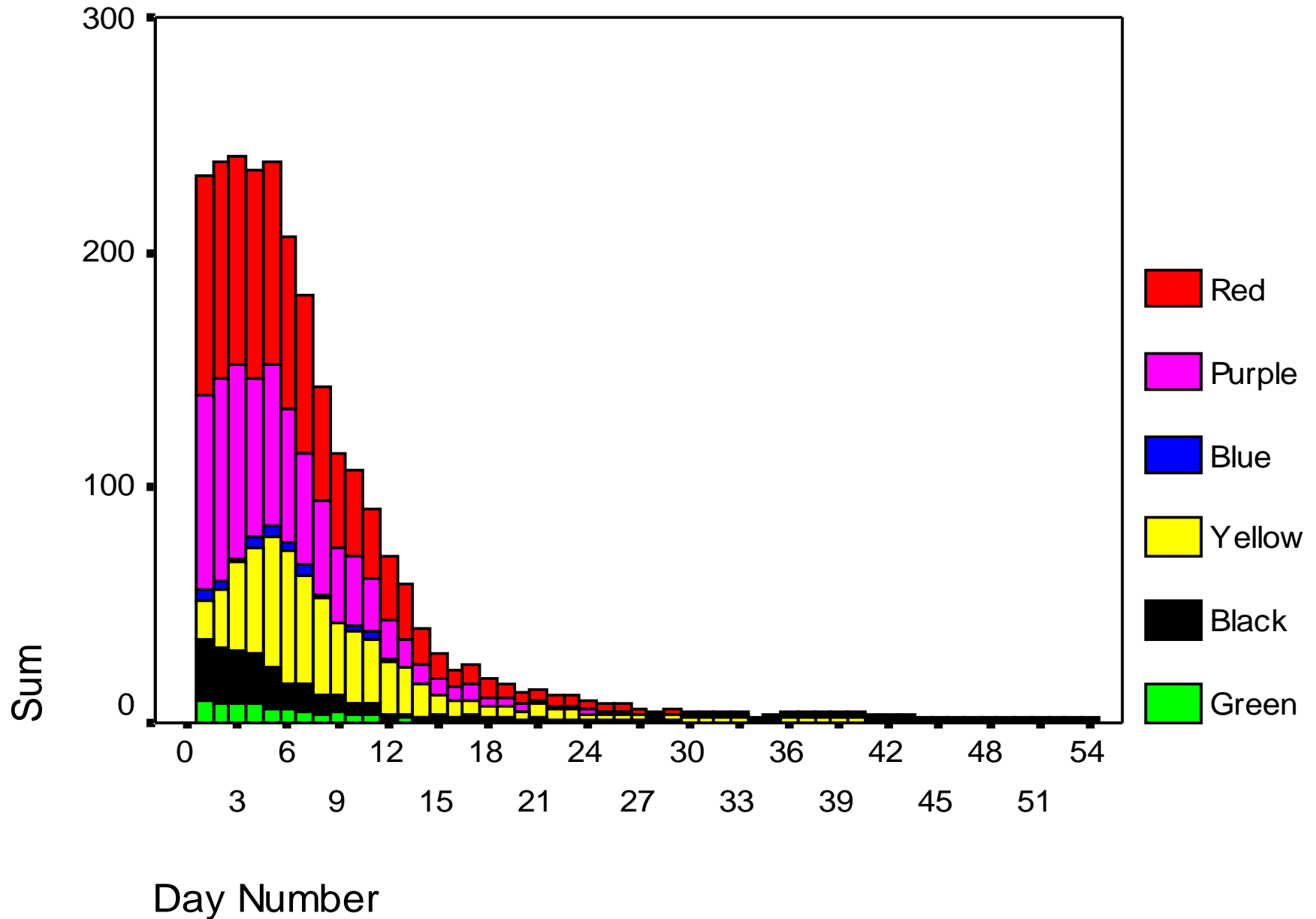
# Bruising

- ⦿ Age-related changes
- ⦿ Medications
- ⦿ Dating by color
- ⦿ Multiple stages of healing
- ⦿ History consistent with injury?
- ⦿ Location

# Note about Bruises

- 
- The graphic shows a white notepad with a yellow tab at the top. A blue sticky note is attached to the notepad, featuring a red torn edge at the top. The sticky note contains a single bullet point.
- Blood follows gravity, so sites of bruising may be away from site of impact-ectopic bruising

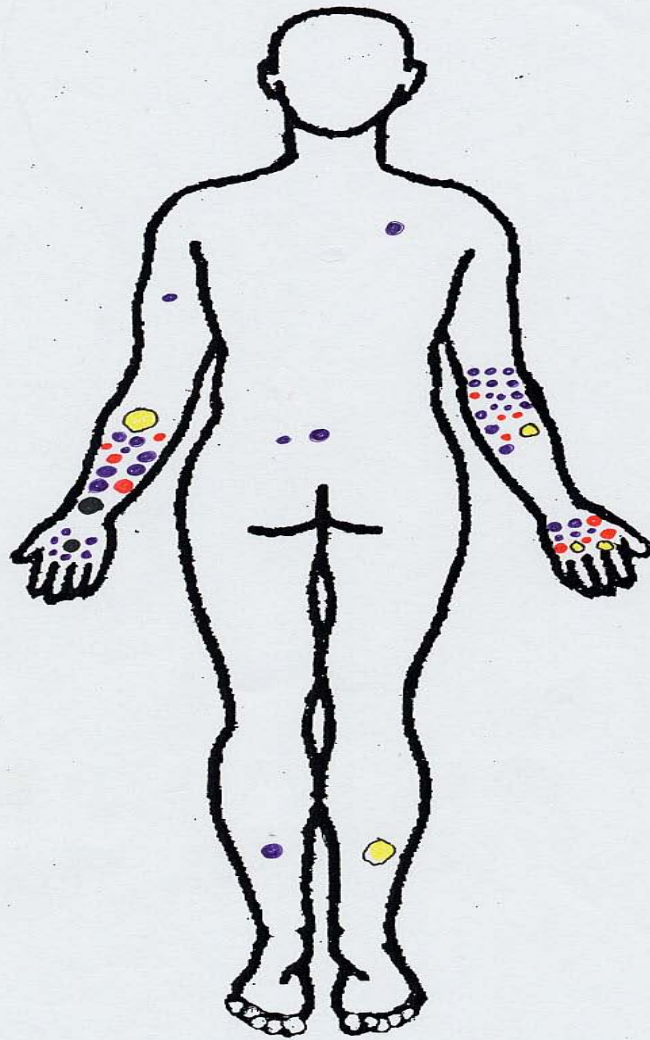
# Progression of color



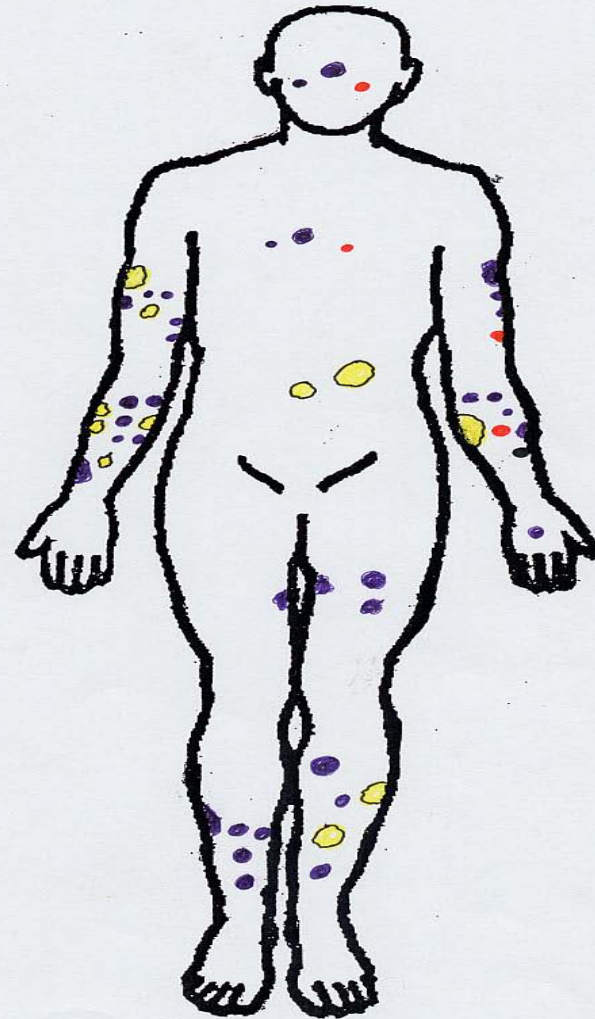
# Bruising I

- 90% on the extremities
- No bruises on the neck, ears, genitalia, buttocks, or soles
- More likely to know cause if on the trunk
- 16 bruises predominately yellow within the first 24 hours of onset
- If on medications known to impact coagulation pathways (e.g., cuomadin), then more likely to have multiple bruises

# Location of Accidental Bruises



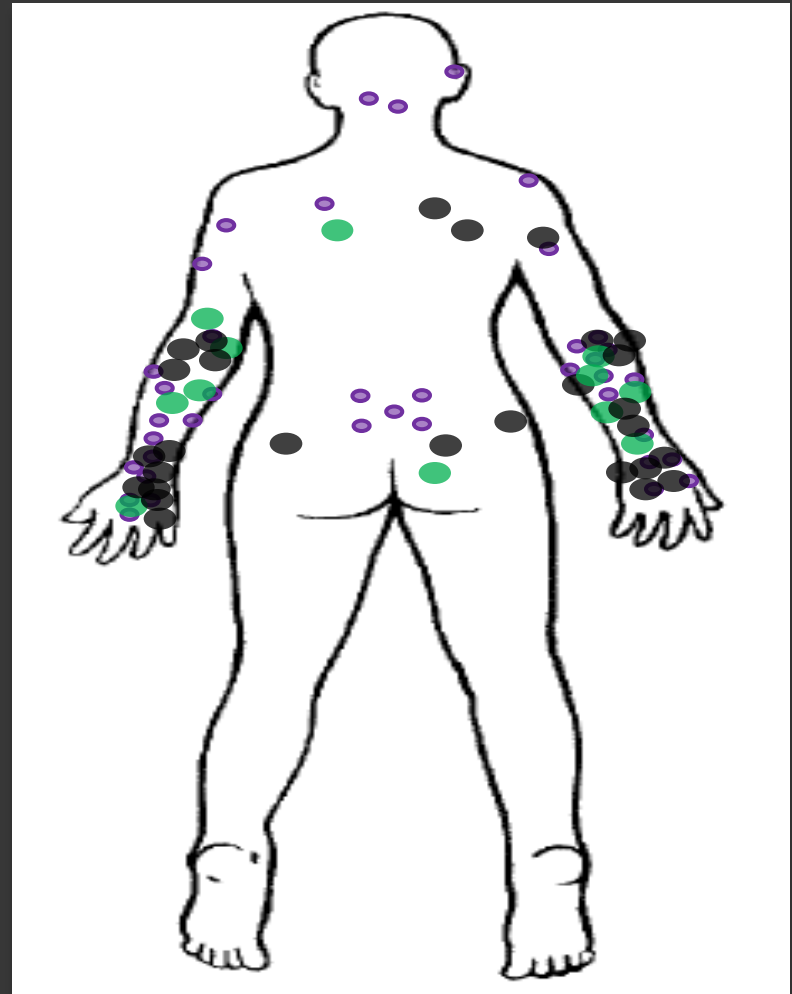
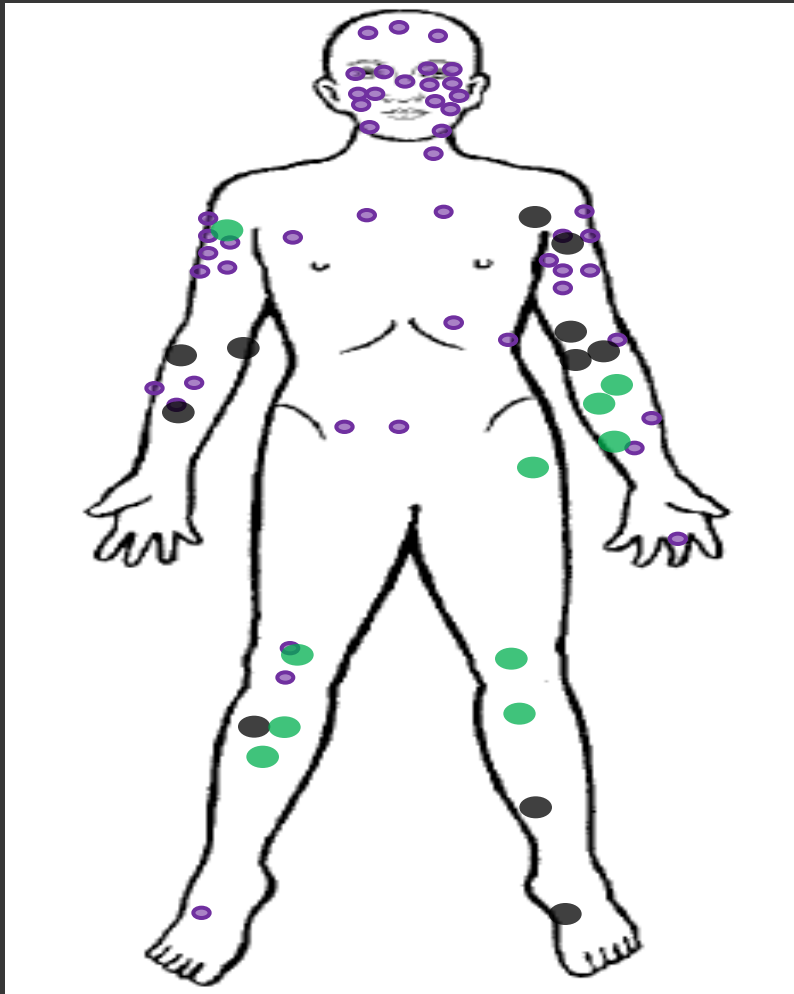
Posterior



Anterior



# Location of Bruises Caused by Abuse



# Bruising II

- (At least) 72% of physically abused older adults had bruises
- Of 155 bruises found, they reported that (at least) 89 were inflicted, 26 accidental and 40 unknown

When is bruising suspicious trauma versus accidental trauma? Which looks more like abuse: A or B?



A



B

Accidental or Inflicted? You decide





# Accidental or Inflicted? You decide



# Notes About Inflicted Bruises



- Inflicted bruises are larger. Size matters! Be suspicious if over 5 cm.

- Abused elders are more likely to have bruises on head, neck, lateral right arm. Pay attention to location!

- People who were abused are much more likely to remember how they got the bruise. Ask!

# Strangulation: signs are often missed



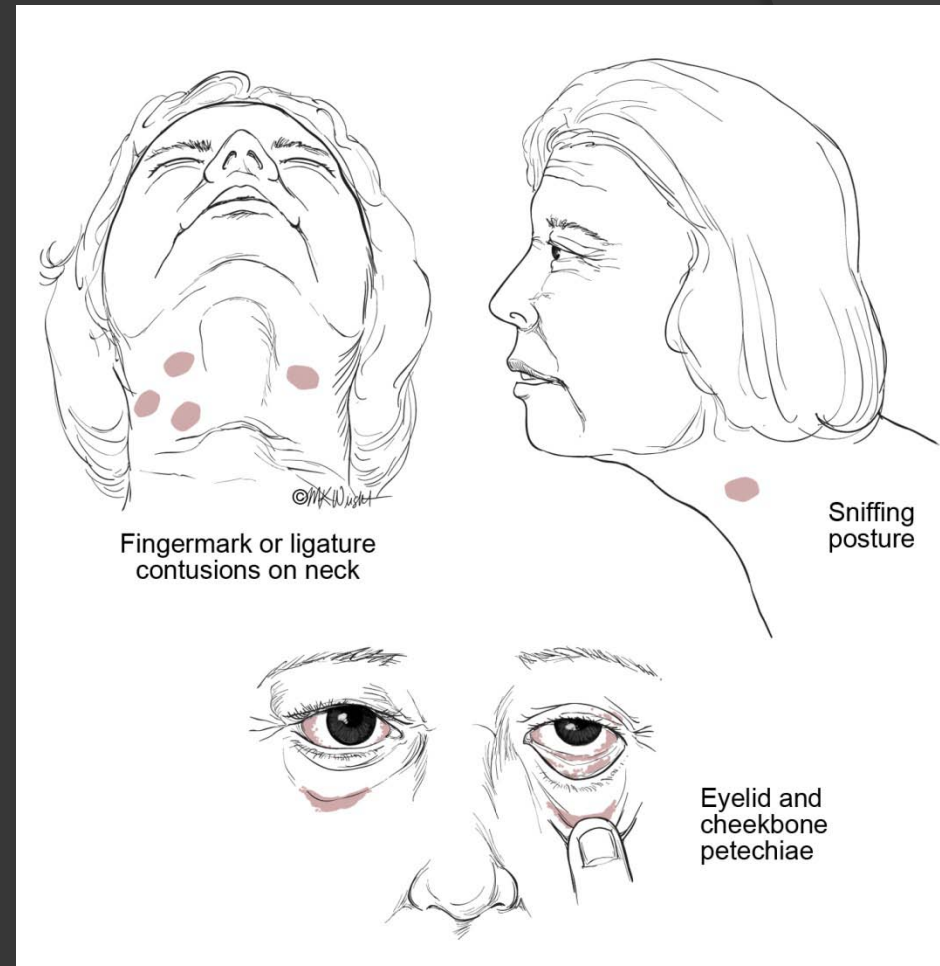
Petechiae located inside the eyelid.



Pronounced petechiae in the whites of the eyes and on the cheeks/face.

# Signs of Strangulation

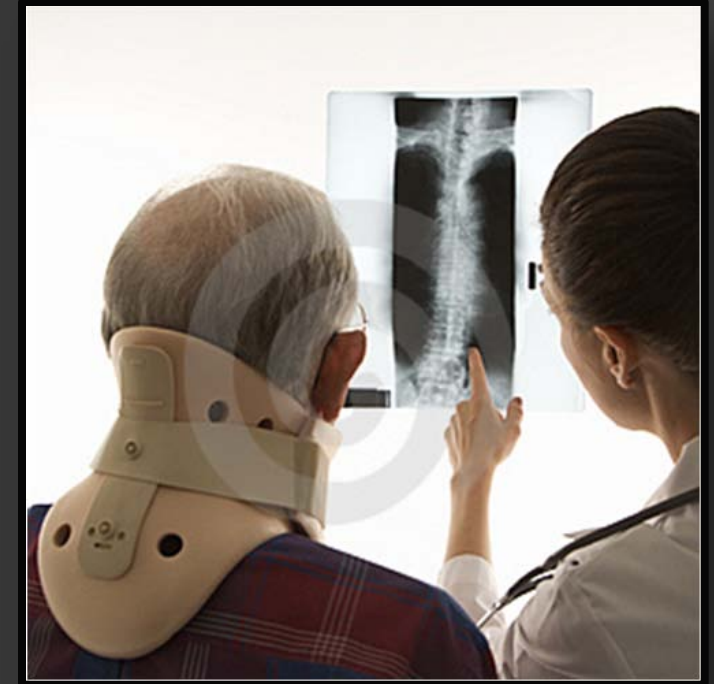
- Difficulty breathing
- Hoarse voice
- “Sniffing position”
- Ask: Did he/she choke you? Did you lose consciousness?
- Can be a medical emergency





# Fractures

- ⦿ Accidental or abusive
- ⦿ May be due to medical condition
  - Osteoporosis
  - Cancer
- ⦿ Many types of fractures
- ⦿ Correlate fracture type to mechanism of injury



# Fractures

- Spiral fractures or fractures with a rotational component are suspicious
- Sites other than hip, vertebra, or wrist may more likely be markers of abuse.



# Burns

- ◎ Persons over the age of 65 have 2X the national average death rate due to burns
- ◎ Seen in physical abuse, neglect and self neglect
- ◎ Limited studies reveal that between 36-70% of burns in adult abuse were due to abuse or neglect (Bowden 1998; Burns 1998)

# When is it abuse?



# Pressure Sores

- ⦿ common
- ⦿ often preventable
- ⦿ usually treatable

# Pressure Sores: Contributing Factors

## ⦿ Nutritional status

- Able to get own food?
- Able to feed self?

## ⦿ Mobility status

- Never moved
- Tied down in one position

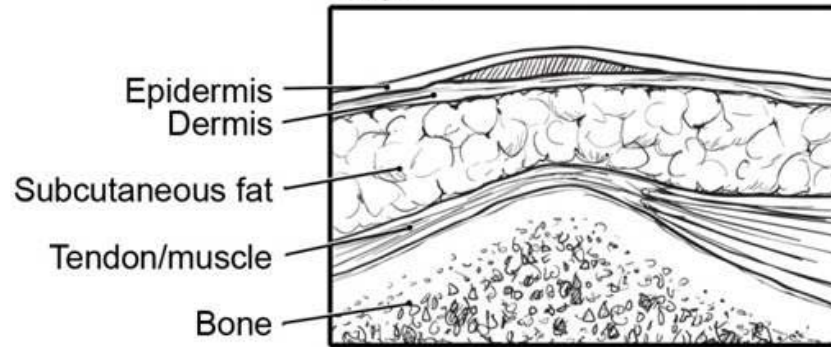
# Pressure Sores

## ⦿ Causes

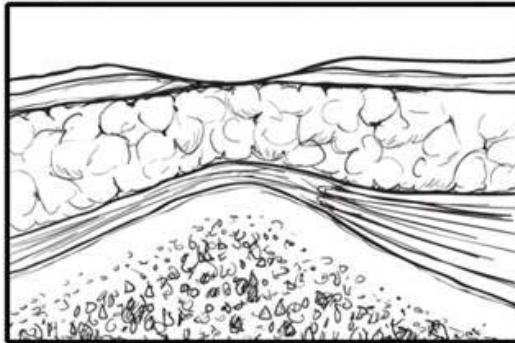
- Pressure
- Friction
- Shearing
- Moisture

## ⦿ Stages (I-IV)

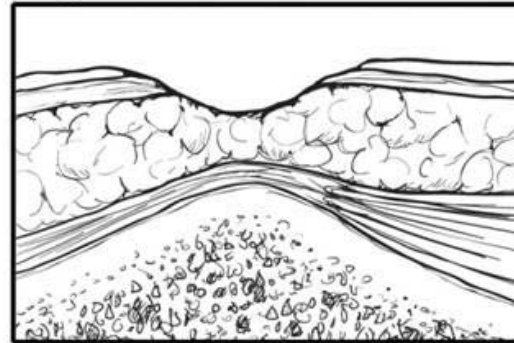
**Stage 1**



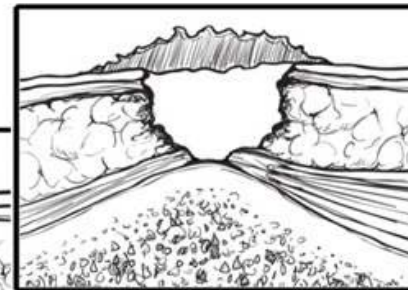
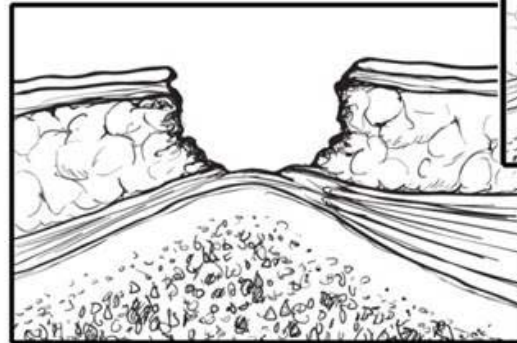
**Stage 2**



**Stage 3**



**Stage 4**



**Stage 4  
with a scab**





# Decubitus ulcer – Stage II



# What stage is this pressure sore?



# Laboratory tests

- ⦿ Malnutrition
- ⦿ Dehydration
- ⦿ Bleeding times
- ⦿ Medication levels

# Other Physical Findings: Not Necessarily Physical Abuse

- Cultural practices
  - Cupping
  - Coining



## ● Cupping



# Context: Cupping or Octopus Attack?





## ● Coining



# Medications: their role in mistreatment

Can be

- **Overused**: to sedate, cause delirium
- **Underused**: to reduce mobility (e.g., L dopa), cause illness exacerbations (insulin, inhalers, antibiotics)
- **Misused**: used for unapproved effects (antihistamines to sedate)





# Medications must be recorded

APS workers and others should record all medications taken by the client, including the following information:

- ⦿ name
- ⦿ prescribed for (if indicated)
- ⦿ frequency
- ⦿ dosage
- ⦿ expiration date

# Talking to Doctors

- ⦿ Concise recount of the story
- ⦿ Medical history and medical records (including labs)
- ⦿ Medications (EVERYTHING!)
  - Rx
  - OTC
- ⦿ Estimate of cognitive status



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*Thank you!*