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# FORENSIC SCIENCE

## HOW TO AGE BRUISES

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# AGING BRUISES

- B. Spilsbury defines a bruise as a hurt or injury to the body by a blunt or heavy instrument causing discoloration, but no laceration of the skin.
- Bruises consist of blood escaping from ruptured capillaries and small veins spreading into the surrounding tissue.
- In forensics it can be very important to age bruises. For example, in a case of child abuse.
- It's very difficult to age a bruise. The only indicator of time is the color of the injury. Now the big question is, at what time the color is changing, and which color is the significant one.



- **red**
- **dusky purple / black**
- **green days**
- **Yellow days**
- **resolution days**

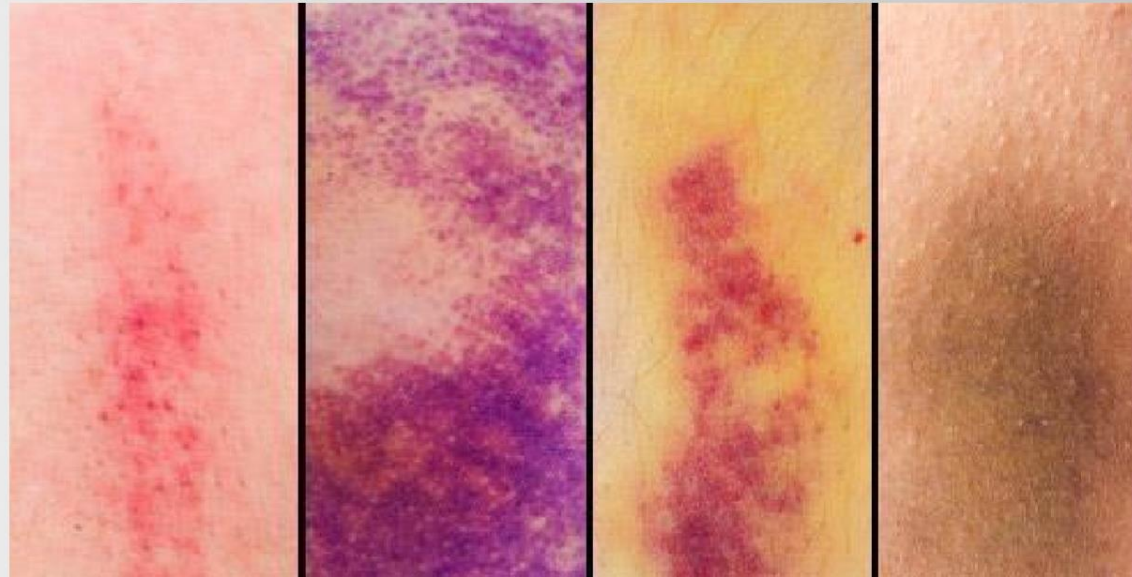
**immediate**

**soon after**

**4 -5**

**7 - 10**

**14 - 15**



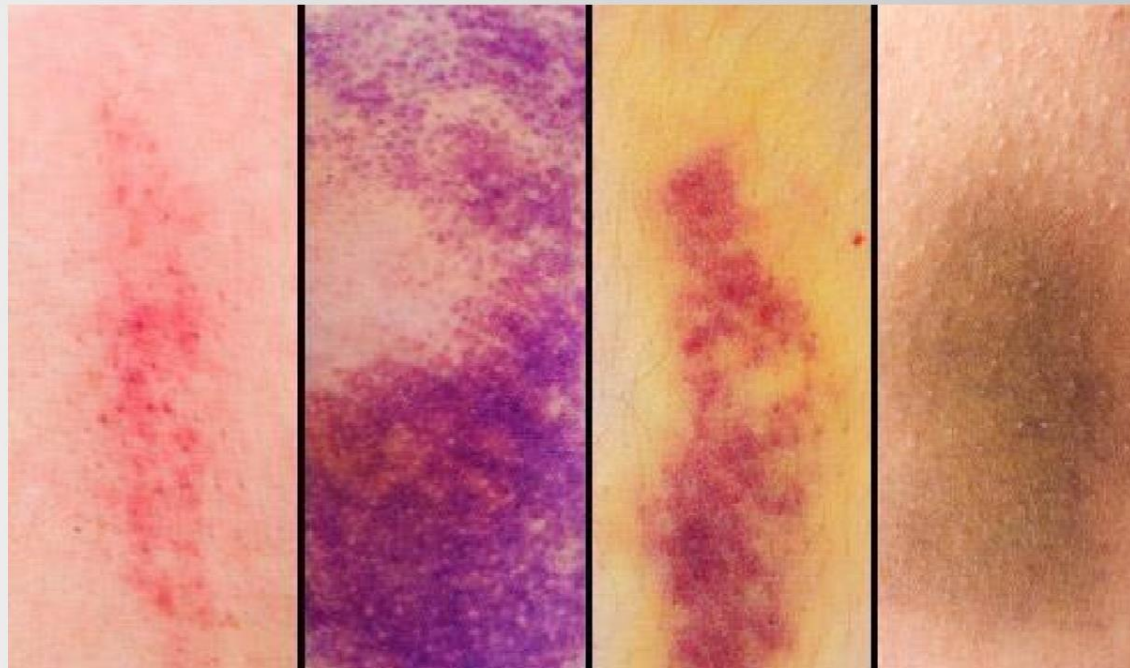
- **violet**
- **blue**
- **green**
- **yellow**
- **resolution**

**immediate**  
**day 3**

**days 5 - 7**

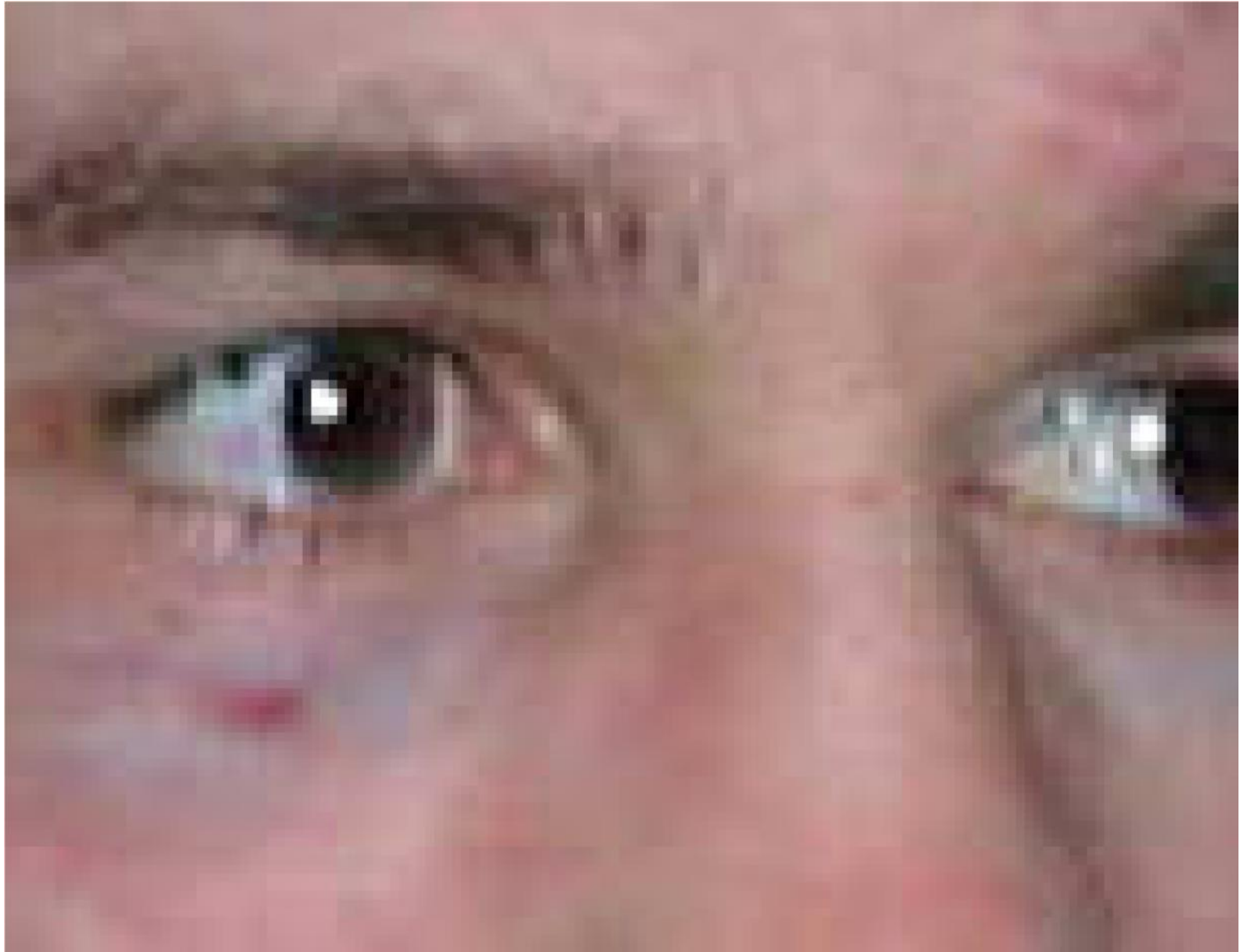
**days 8 - 10**

**days 13 - 18**



# BRUISING EXAMPLES

- 45 Minutes after being struck!
- Ice was applied immediately after assault.







**73 HOURS  
AFTER THE  
IMPACT**



**87 HOURS  
AFTER THE  
IMPACT OR  
3 DAYS AND  
15 HOURS**



**92 HOURS OR  
3 DAYS AND  
20 HOURS**





**111 HOURS  
OR 4 DAYS  
AND 15  
HOURS**



**137 HOURS  
OR 5 DAYS  
AND 17  
HOURS**



**6 DAYS AND  
15 HOURS**



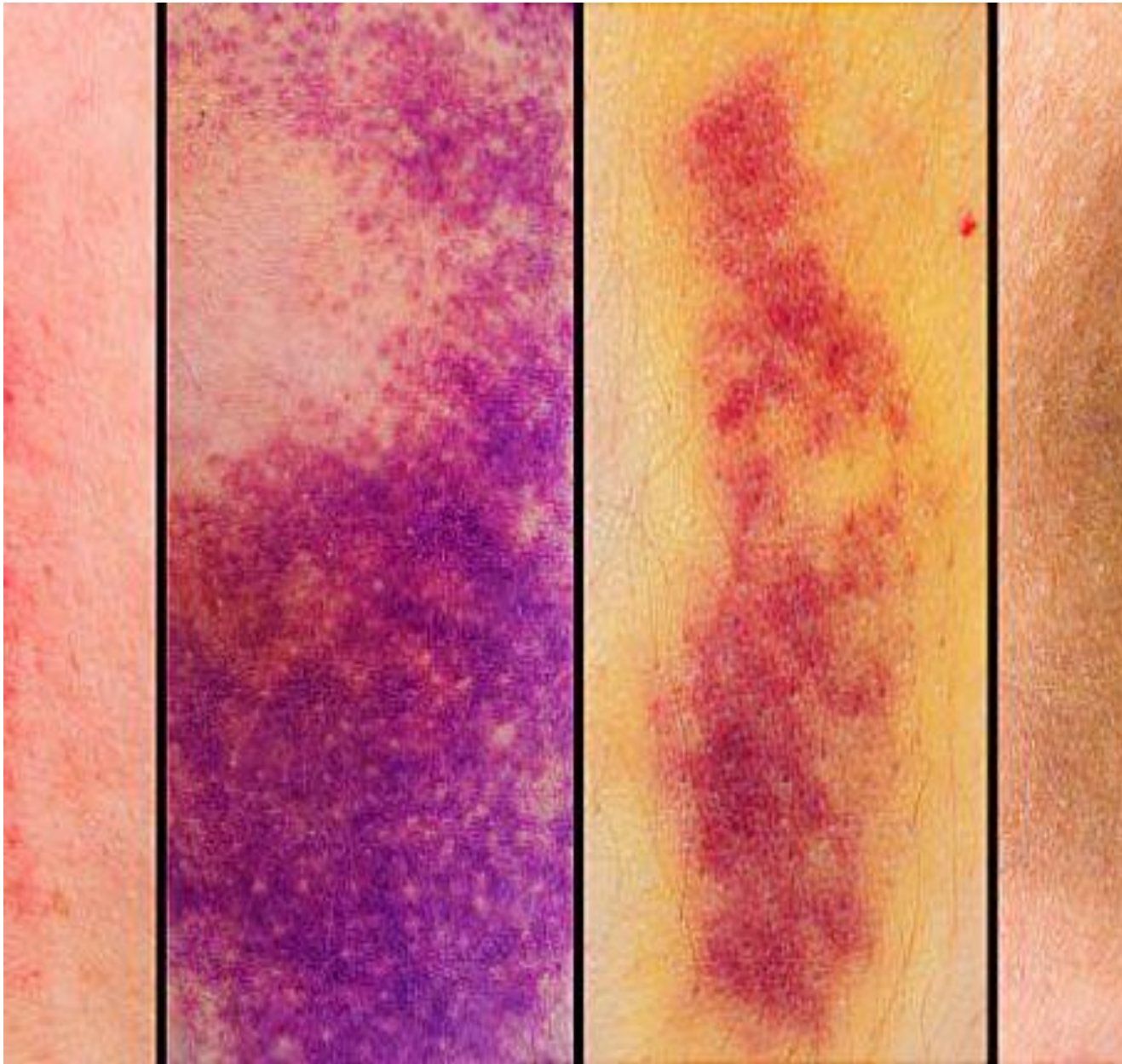


**AFTER 12  
DAYS**

## AGE RELATED CAUSES OF EASY BRUISING IN OLDER ADULTS

- Most bruises form when small blood vessels (capillaries) near your skin's surface are broken by the impact of a blow or injury. When this happens, blood leaks out of the vessels and initially appears as a bluish-black mark. Eventually your body reabsorbs the blood, and the mark usually disappears.
- Some people — especially **women** — are more prone to bruising than are others. As you get older, several factors may contribute to increased bruising, including:
  - **Aging capillaries**- over time, the tissues supporting these vessels weaken, and capillary walls become more fragile and prone to rupture.





## AGE RELATED CAUSES OF EASY BRUISING IN OLDER ADULTS: *CONTINUED*

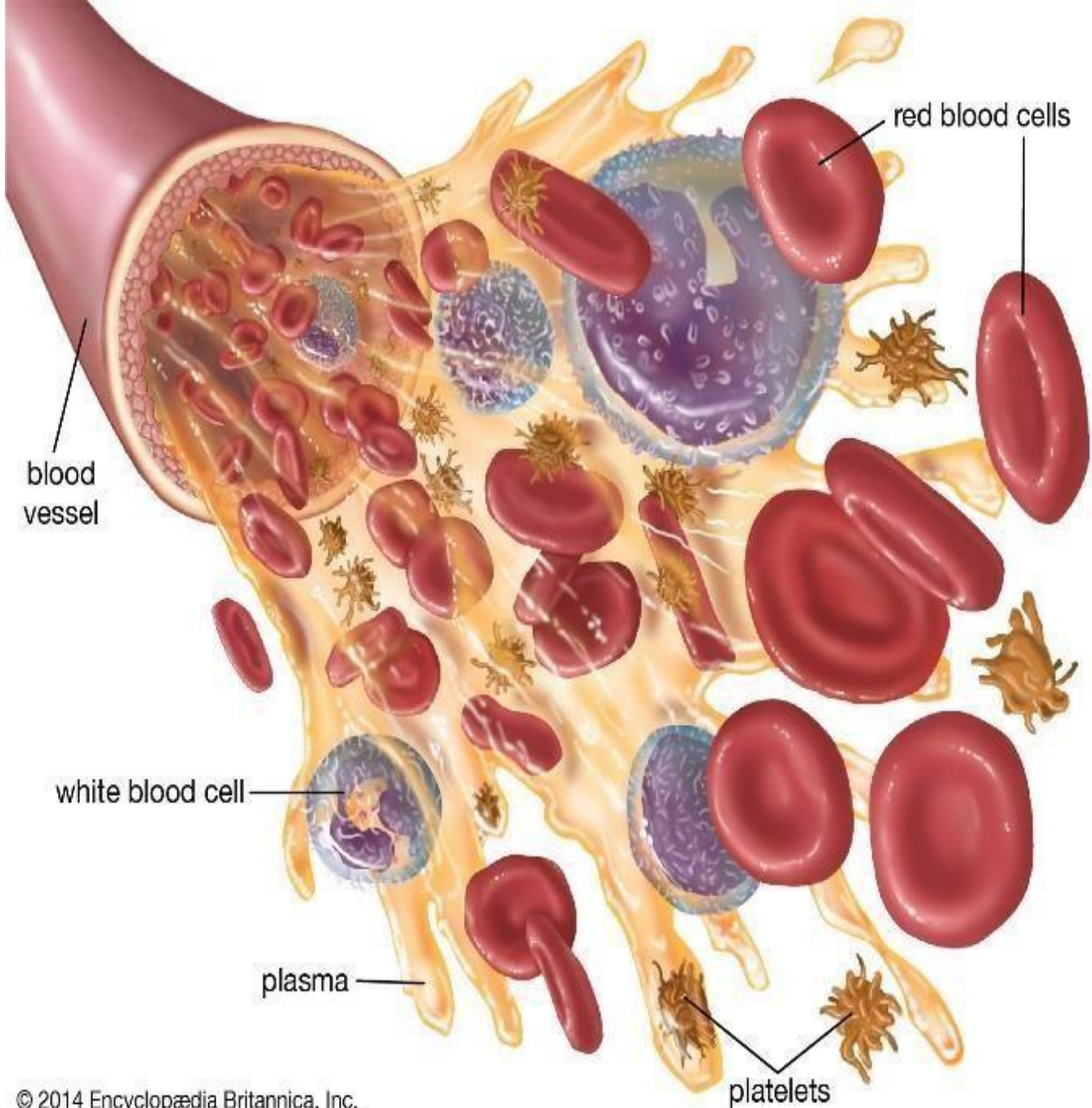
- **Thinning skin.** With age, your skin becomes thinner and loses some of the protective fatty layer that helps cushion your blood vessels against injury. Excessive exposure to the sun can affect your skin much like aging does.
- **Blood-thinning drugs** such as aspirin and warfarin (Coumadin) or medications such as clopidogrel (Plavix) reduce your blood's ability to clot. Because of this, bleeding from capillary damage that would normally stop quickly may take longer to stop, allowing enough blood to leak out to cause a bruise.
- **Corticosteroids** cause your skin to thin, making it easier to bruise. Don't stop taking your medications if you experience increased bruising. Talk to your doctor about your concerns and ask what you should do.
- **Dietary Supplements** such as fish oil, ginkgo, ginger and garlic also may increase your bruising risk, since these supplements have a blood-thinning effect. Make sure your doctor is aware of any supplements you're taking — especially if you're taking them while on a blood thinning drug. Your doctor may recommend avoiding certain over-the-counter medications or supplements.



## WHEN BRUISES INDICATE MORE SERIOUS PROBLEMS

- Bruising may also indicate something more serious, such as a blood-clotting problem or a blood disease. See your doctor if:
  - You have unusually large or painful bruises, particularly if your bruises seem to develop for no known reason.
  - You're bruising easily and you're experiencing abnormal bleeding elsewhere, such as from your nose, gums or intestinal tract.
  - You have no history of bruising but suddenly experience bruises, particularly if you recently started a new medication.





## WHEN BRUISES INDICATE MORE SERIOUS PROBLEMS CONTINUED

- **Low Levels:** or abnormal function, of platelets, components of blood that help it clot after an injury. To diagnose the cause of your bruising, your doctor may check your blood platelet levels or do tests that measure the ability of your blood to coagulate.
- **Domestic Violence or Abuse:** If a loved one has an unexplainable bruise, particularly in an unusual location such as around the eye or face, inquire about the possibility of abuse.



**QUESTIONS  
OR  
COMMENTS**