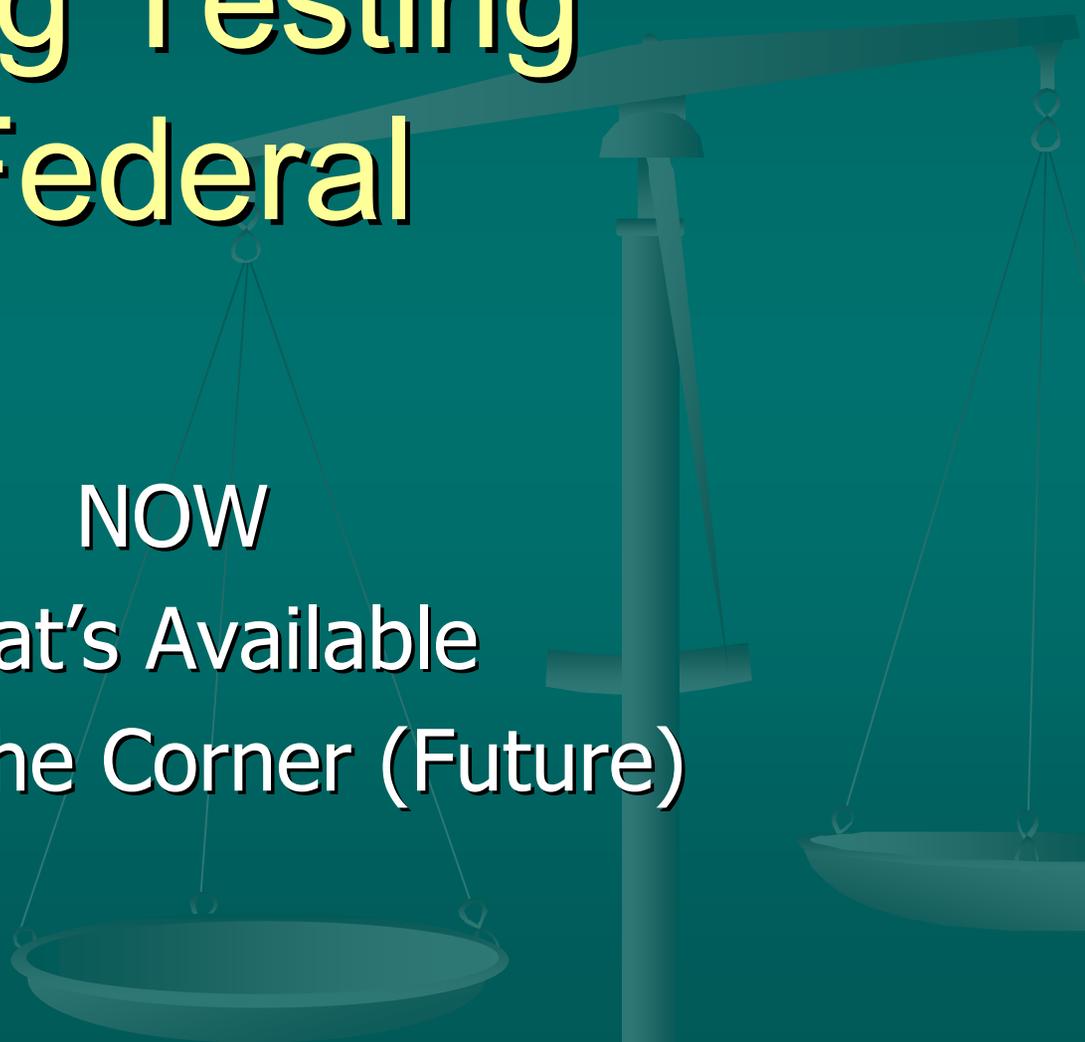


Drug Testing Federal



NOW

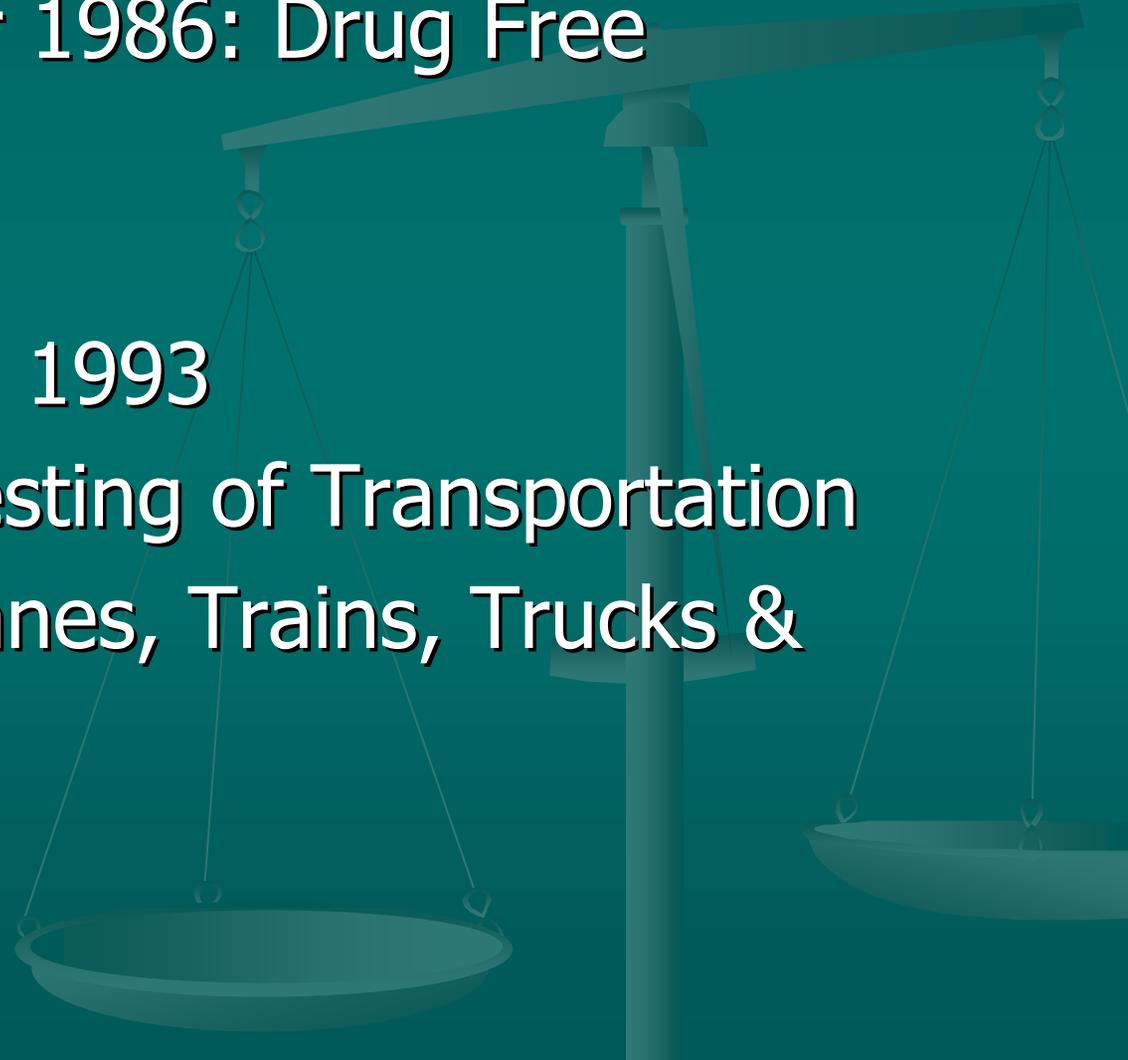
What's Available
Around the Corner (Future)

Background

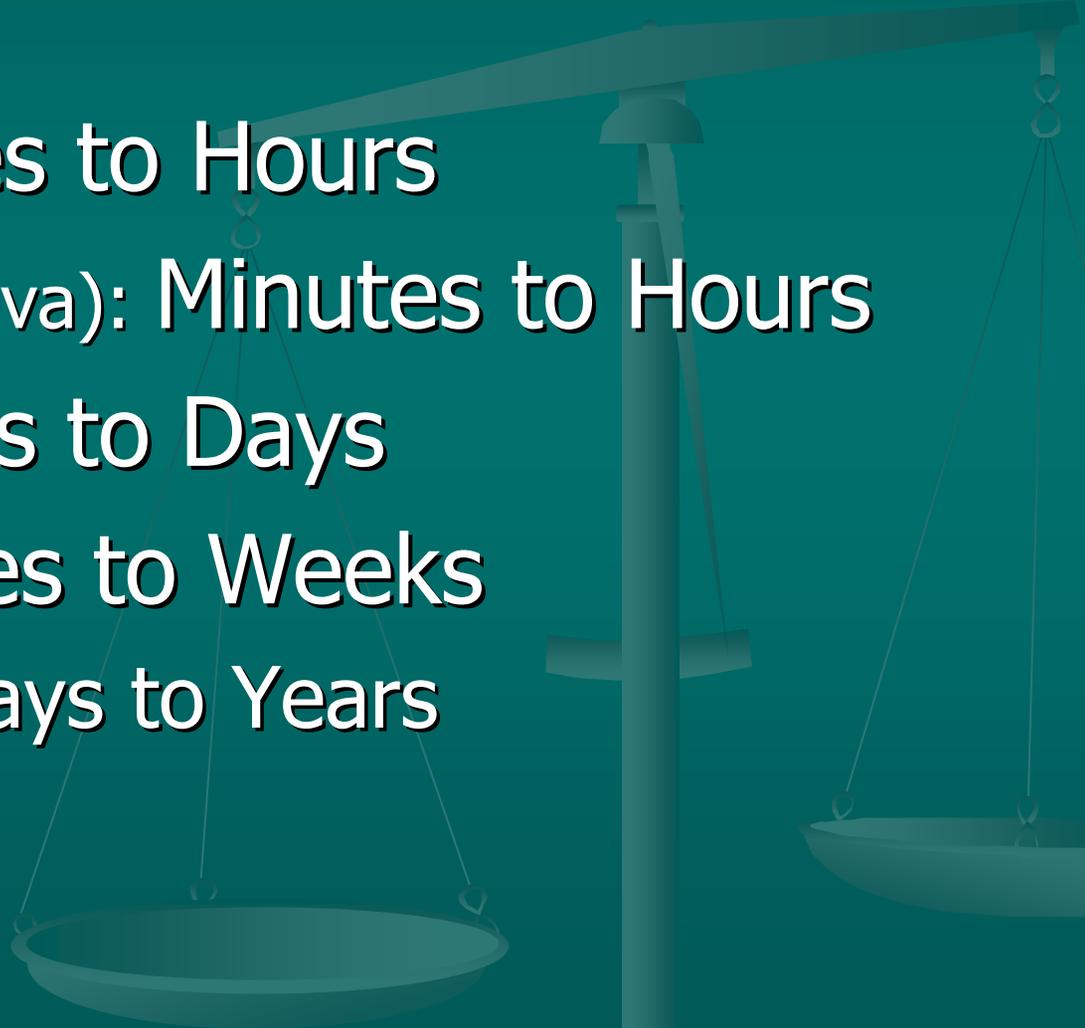
Executive Order 1986: Drug Free Workplace

DOT Regulation 1993

Requiring Testing of Transportation Workers (Planes, Trains, Trucks & Buses)



General Detection Rates

- Blood: Minutes to Hours
 - Oral Fluids (Saliva): Minutes to Hours
 - Urine: Minutes to Days
 - Sweat: Minutes to Weeks
 - Hair & Nails: Days to Years
- 

Cutoff Levels

Initial Screening

- Immunoassay Test
 - Marijuana Metabolites
50 ng/mL
 - Cocaine Metabolites
300 ng/mL
 - Opiate Metabolites
2000 ng/mL
 - PCP 25 ng/mL
 - Amphetamines
1000 ng/mL

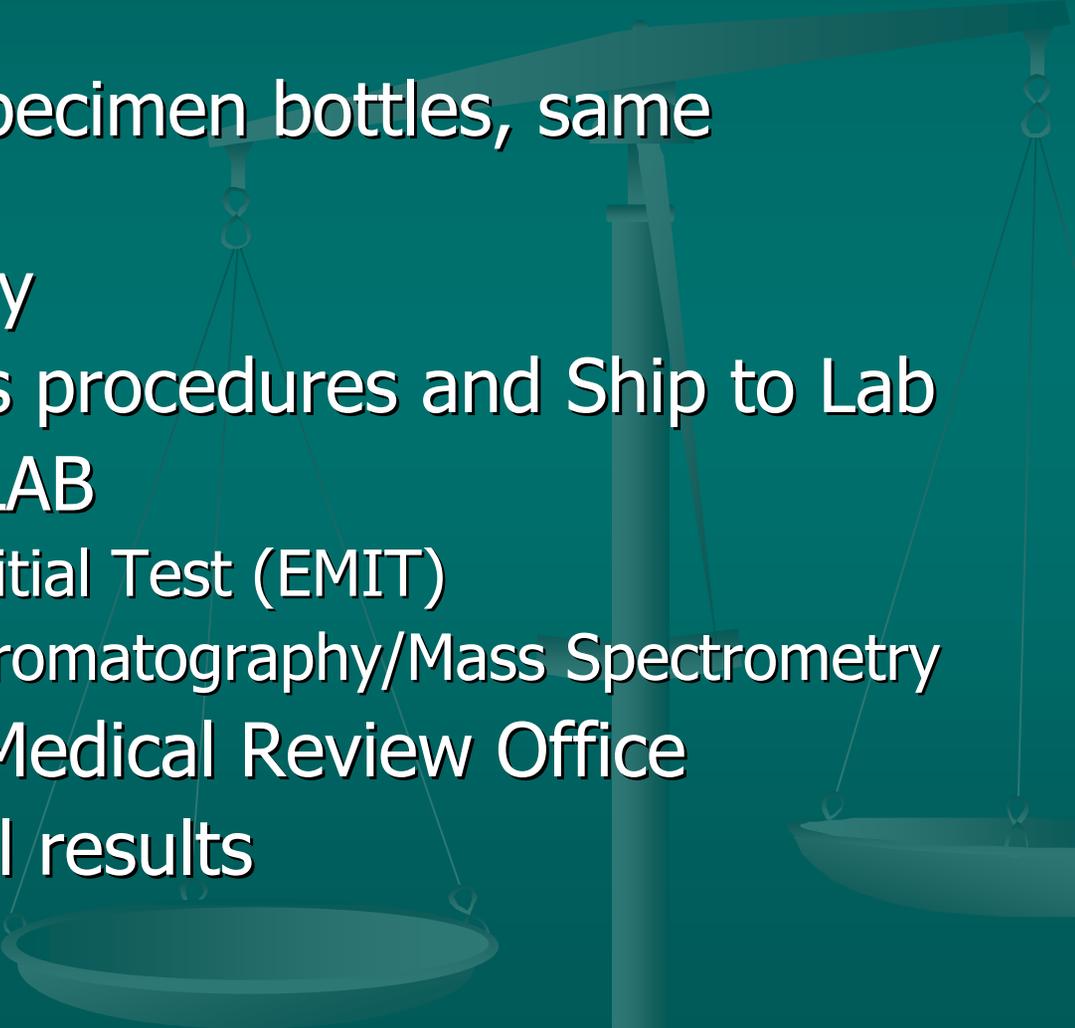
Confirmations

- GC/MS
 - Marijuana Metabolites
15 ng/mL
 - Cocaine Metabolites
150 ng/mL
 - Opiate Metabolites
2000 ng/mL
(Morphine, Codeine)
 - PCP 25 ng/mL
 - Amphetamines
500 ng/mL (Amp & Meth)

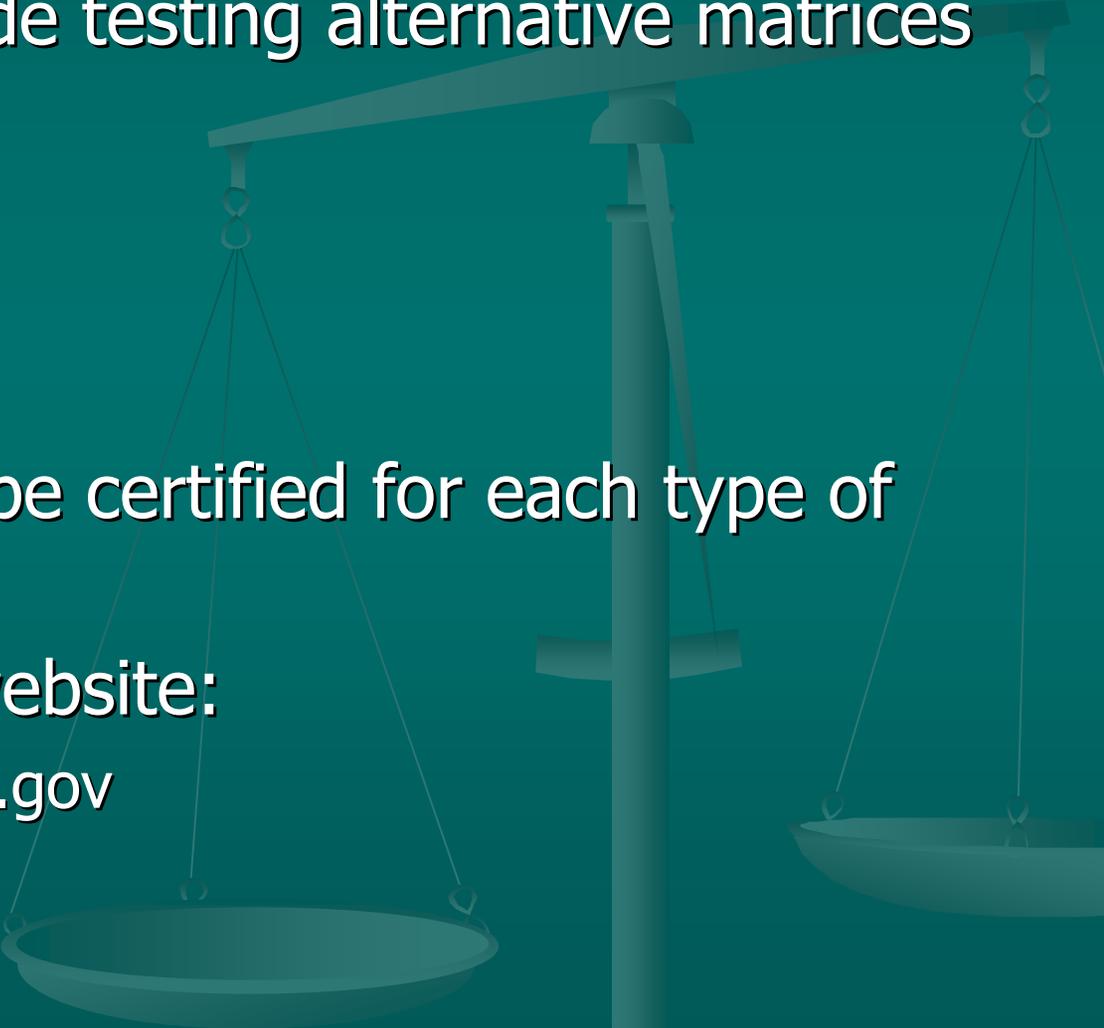
Specimen & Adulteration Methods

- Cat and Mouse Games Continues
 - Labs Vs Sellers (of drugs, secondary products)
 - High Times & other Magazines
 - Internet Shopping "Beat a Drug Test"
 - Yielded about 150,000 hits in 2002
 - Yielded about 400,000 hits in 2004
 - Household favorites: Soap, bleach, Mt Dew, etc.

Urine Specimen Collection

- Single 30 ml
 - Split 45 ml (2 specimen bottles, same specimen)
 - Chain of Custody
 - Collector follows procedures and Ship to Lab
 - NIDA Certified LAB
 - Screening or Initial Test (EMIT)
 - GC/MS Gas Chromatography/Mass Spectrometry
 - LAB Results to Medical Review Office
 - MRO issues final results
- 

Proposed Rules Changes HHS

- Expanded to include testing alternative matrices
 - Hair
 - Oral Fluid
 - Sweat (patch)
 - Urine
 - Testing Lab must be certified for each type of specimen tested
 - Public Comment website:
 - workplace.samhsa.gov
- 

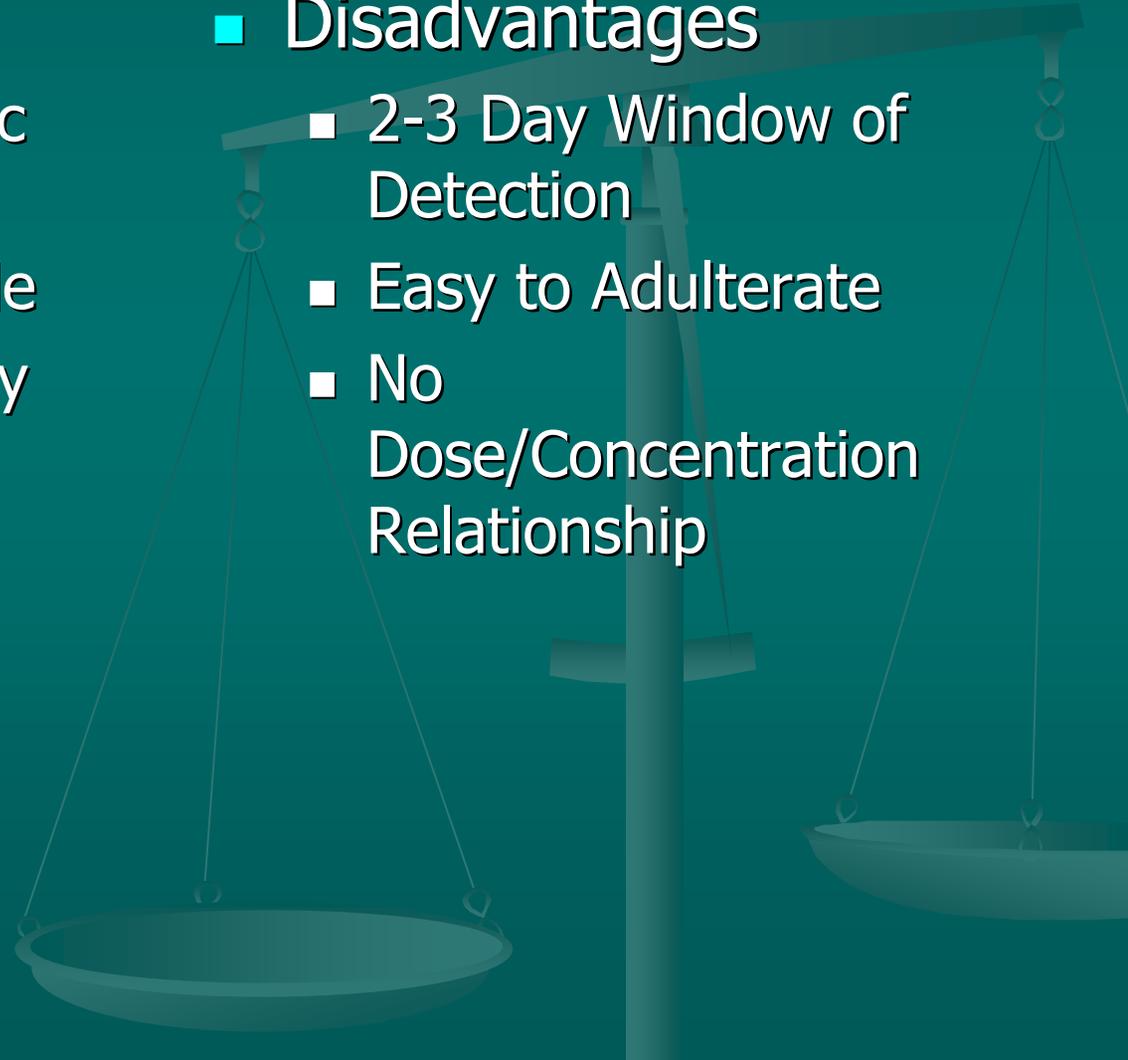
Urine Drug Testing

■ Advantages

- Extensive Scientific Base
- Accurate & Reliable
- Mature Technology

■ Disadvantages

- 2-3 Day Window of Detection
- Easy to Adulterate
- No Dose/Concentration Relationship



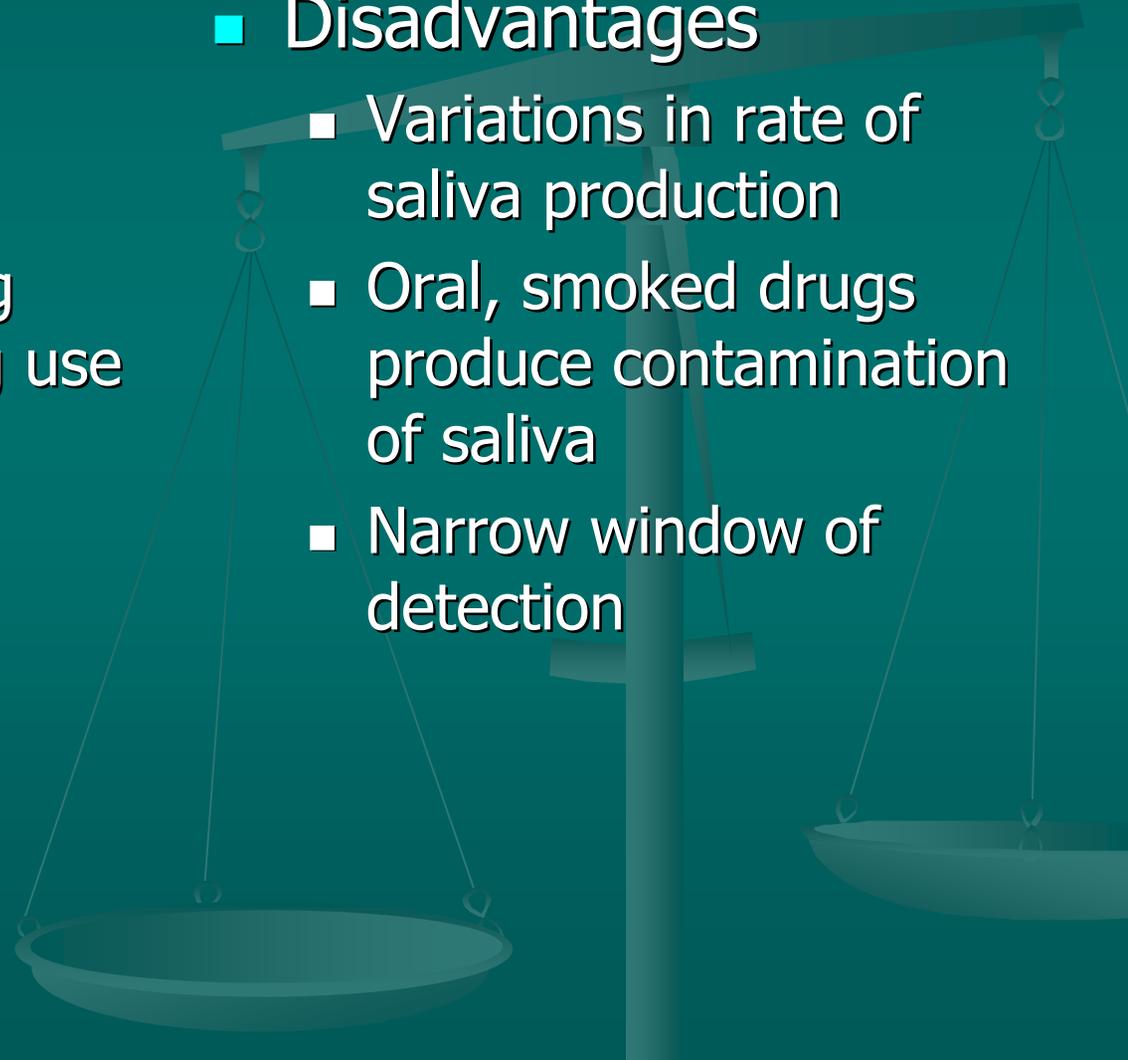
Oral Fluid (Saliva) TESTING

■ Advantages

- Noninvasive, easy collection
- Useful in detecting (very) recent drug use

■ Disadvantages

- Variations in rate of saliva production
- Oral, smoked drugs produce contamination of saliva
- Narrow window of detection



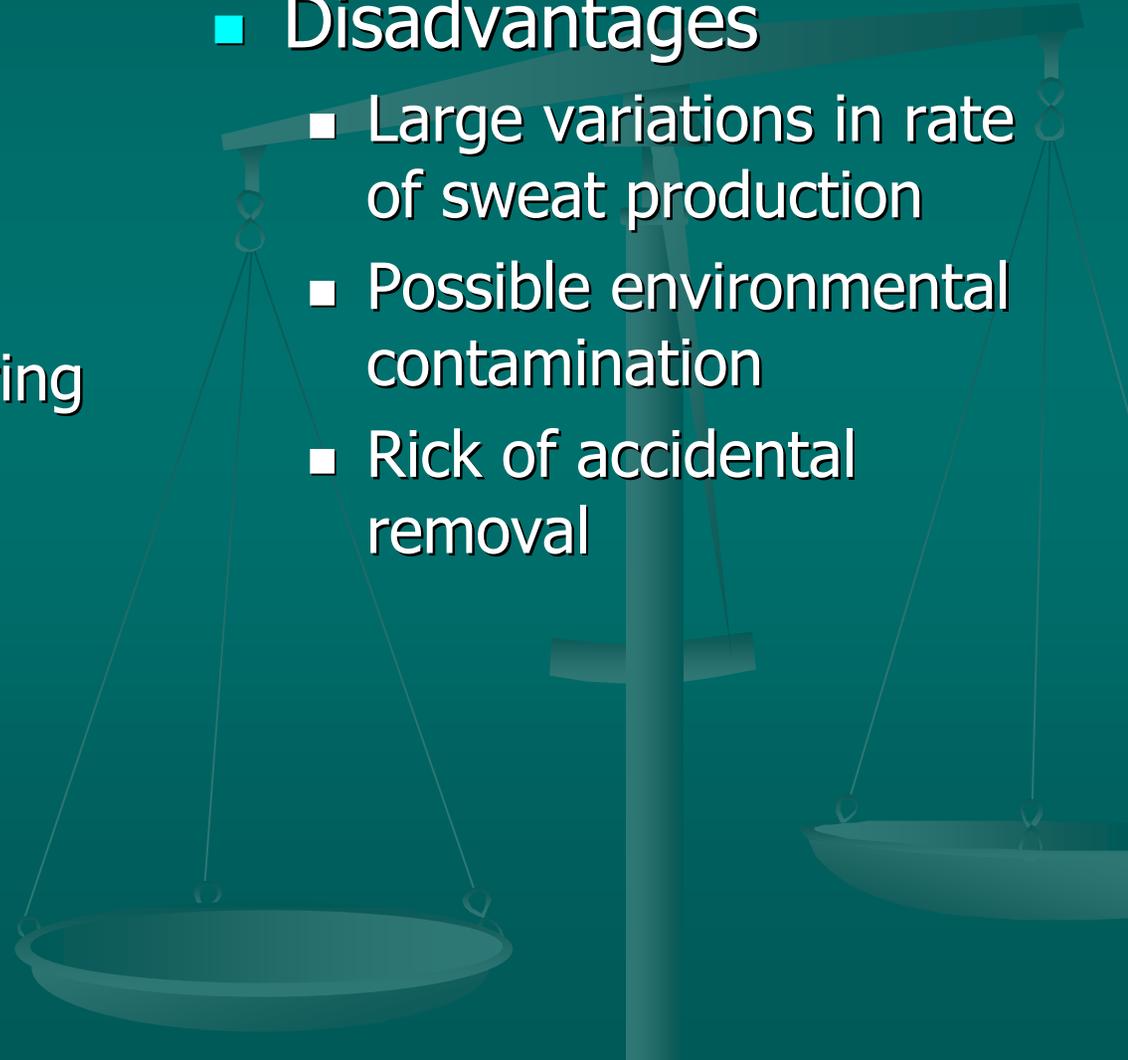
Sweat Testing

■ Advantages

- Noninvasive
- Relatively tamper proof
- Useful for monitoring for about a week

■ Disadvantages

- Large variations in rate of sweat production
- Possible environmental contamination
- Risk of accidental removal



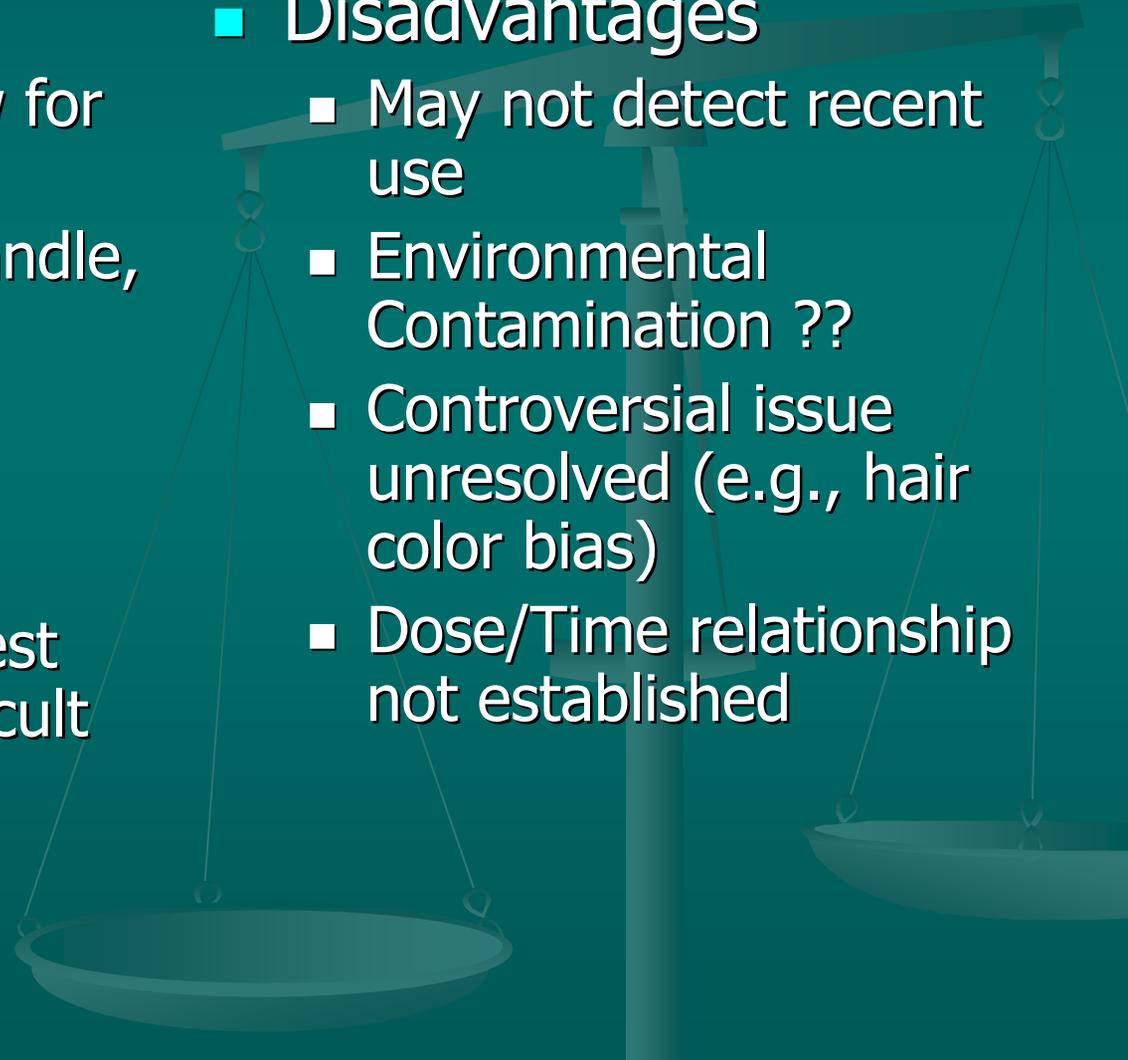
Hair Testing

■ Advantages

- Long time window for drug detection
- Easy to collect, handle, store
- Second collection capability
- Noninvasive
- “Beating” a hair test may be more difficult than urine

■ Disadvantages

- May not detect recent use
- Environmental Contamination ??
- Controversial issue unresolved (e.g., hair color bias)
- Dose/Time relationship not established



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