UNIVERSITY OF ILLINOIS SPRINGFIELD

Environmental Health and Safety

UNIVERSITY OF ILLINOIS SPRINGFIELD

Ravneet Chhokar

Director of Safety and Environmental Compliance

Office location: BSB1

Phone: 217-206-8062

E-mail: rchho2@uis.edu



Environmental Health & Safety office

- Responsible for compliance to federal, state, and local regulatory agencies.
  - OSHA
  - EPA; IL-EPA
  - NFPA
  - DOT
  - DOL and more





Environmental Health and Safety Programs

- Environmental Compliance/Services
- Occupational Safety & Ergonomics– primarily F&S , all UIS staff
- Hazard Communication (Right to Know)
- Hazardous/Chemical Waste (storage, use, transport, and disposal)
- Regulatory and Technical Assistance
- Emergency Management



EHS Campus Commitment



Safe work Environment

Proactive risk prevention and unified campus protection programs.

Regulatory Compliance

Adhering strictly to federal, state, and local environmental standards.

Partnership

Collaborative effort supporting departments across campus daily.



Environmental Compliance & Services

- Injury/Incident Procedures
- Fire Safety
- IAQ/Odors
- Hazard Communication
  - **Right to know training and container labeling**
  - **Safety data sheets accessible across campus.**
- Safety Training
- Slip, Trip and Falls
- Ergonomics
  - **Safe lifting**
- Emergency preparedness
  - **Spill and emergency response procedures**
  - **Written emergency action plan administration**





Injury/Incident Procedures

- Life Threatening
- Non-Life Threatening
- Eye
- Puncture
- Skin







First report of Injury

- Form available online – workers compensation webpage - Police webpage
  - OSHA reportable
    - **Send Report of Injury to Workers Compensation**







Safety Training agenda UIS

- Faculty
- Staff – F&S

Faculty – Annual

F&S BSW- Annual

F&S Trades- Quarterly, as needed.



UIS EHS Required Training for Facilities and Services

Topics (Alphabetically)	Required: Initial	Required: Change in Work or Plan, Equipment	Required: Inadequacies	Required: Annual Refresher	Required: Every 3 Years	Certifications	Written Plans/ Procedures	Not Required/ Voluntary	Comments
Arborist Awareness	√								
Bloodborne Pathogens	√	√		√		√	√		√
Confined Space (Permit Required - Rescue)	N/A								N/A
Confined Space (Permit Required)	√	√	√			√	√		√
Electrical Safety	√								
Fall Protection (Personal Fall Arrest System)	√								√
Hot Work (Welding, Cutting, Brazing)	√								
Ladder Safety								√	√
Material Handling (Forklift)	√				√				√
Means of Egress (Emergency Plans/ Fire Prevention)	√	√					√		
Medical Services and First Aid								√	Heart Association - CPR - 2019
Occupational Health (Hearing Protection Over 85 decibels)	√	√		√			√		N/A
Powered Man lifts	√						√		
PPE	√	√	√			√			√
Respiratory Protection	√	√	√	√		√			√
Subpart Z (Arborist, Lead)	√			√					N/A
Occupational Health (Hearing Protection Under 85 decibels)								√	N/A
Power Tools								√	Supervisor specific

Safety Training topics by EHS

- Lab Safety Training – Faculty
- F&S Staff & campuswide
- Waste management; Spill prevention
- Fall Protection
- HAZCOM
- Confined Space
- Heat Stress
- Fall Protection; Boom Truck/Lift
- Asbestos Awareness
- Forklift Safety
- BSW Safety Training
- And more

Faculty – Annual

F&S BSW- Annual

F&S Trades- Quarterly,
as needed.

Fire Safety

Types of Fires

ABC Fire Extinguisher

P A S S System

Things to Remember

Procedures for Small & Large Fires



Types of Fires

- Class A
  - Combustible solids
- Class B
  - Flammable liquids and gases
- Class C
  - Electrical
- Class D
  - Metals



ABC Fire Extinguisher

- Class ABC extinguishers are located throughout the campuses
- Inspected monthly
  - Correct pressure
  - No damage
  - Initial attached card
- Serviced annually
  - Outside vendor



Use of a Fire Extinguisher (PASS System)

- **P**ull the pin
- **A**im at the base of the fire
- **S**queeze the handle
- **S**weep from side to side







Procedures in a Small Fire

- Use the P A S S method for extinguishing the small fire
- If the fire cannot be handled with one extinguisher evacuate to the emergency assembly area and receive instructions
- Meet and direct the police or fire fighters as they arrive
- Remain at the assembly area until told it is safe to return to the building.



Procedures in a large fire

Pull fire alarm.Evacuate and close doors as you go without locking them.

Evacuate building using the most direct route and nearest exit.

Do not use elevators.

Notify emergency personnel of persons with disabilities who are in the building and need help to evacuate.

Notify UIS Police Department concerning any special circumstances such as failure of the staff to evacuate persons with disabilities. This information will be forwarded to the Springfield Fire Department.



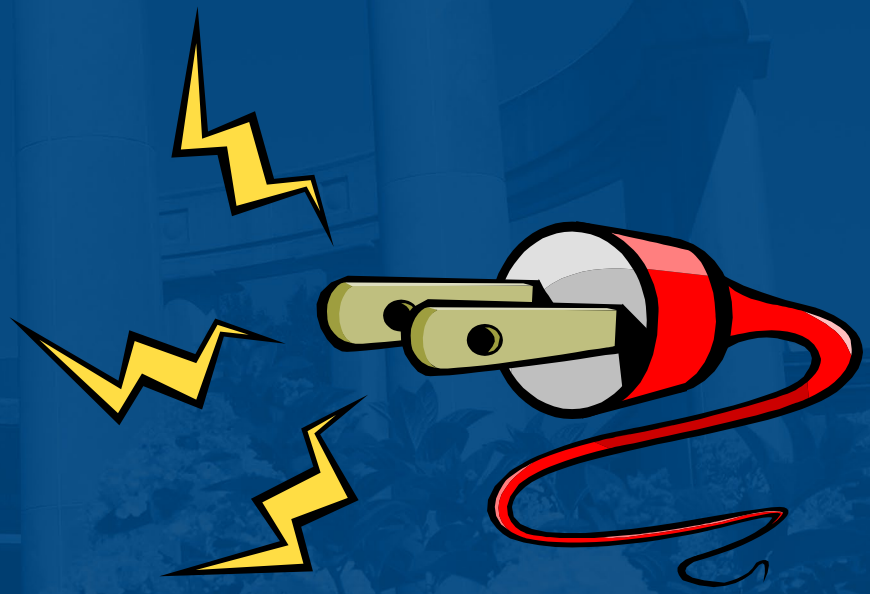
Things to Remember

- Most extinguishers are exhausted in less than 30 seconds
- Always hold the extinguisher upright
- Always keep an exit at your back



Electrical Safety

- Use power strips with surge protection
- Do not overload electrical circuits or outlets
- Do not block electrical panels
- Do not use extension cords as permanent wiring or under carpets and rugs



Indoor Air Quality

Odors

Common Causes

Poor indoor air quality (IAQ) and workplace odors can cause health symptoms like eye, nose, and throat irritation, headaches, fatigue, and worsened respiratory issues like asthma





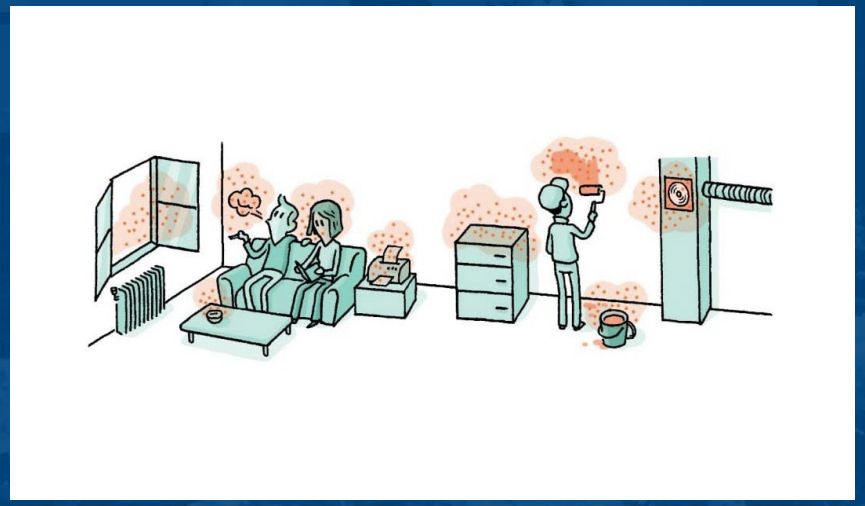
Common Causes of Workplace Odors and Poor IAQ

Volatile Organic Compounds (VOCs): Released by air fresheners, cleaning sprays, deodorants, and scented candles.

Stagnant or Limited Ventilation: Traps carbon dioxide, moisture, and chemical fumes when windows stay shut or air vents get blocked.

Dampness and Mold: Caused by hidden water leaks, wet ceiling tiles, or damp carpets that lead to musty odors.

Breakroom and Waste Issues: Leftover food waste, unemptied garbage, or strong-smelling stored items.





Indoor Air Quality

- Common indoor air quality problems
  - Dirty carpet
  - Construction/remodeling (indoor & outdoor)
  - Temperature
  - Humidity
  - Odors





Odors

- Most affect only a single room or suite
- Typical Odor/Sources
  - Dry drain trap (run water down unused sinks monthly)
  - Forgotten food or trash
  - Uncapped pipes in ceiling or wall
  - Laboratory chemicals or experiments





Common Causes of IAQ problems

Construction/remodeling (indoor & outdoor)

- Dust

Poor Ventilation

Inconsistent Temperatures

Odors



What can EHS do?

- Conduct air monitoring for:
  - Volatile Organic Compounds (VOC's)
  - Mold Spores
  - Carbon Monoxide
  - Other Specialized



What can F&S/maintenance do?

- Check filters regularly
- Seal unused cup sinks if a problem exists
- Ensure that Heating, Ventilation, & Air Conditioning is functioning correctly.
- Call EHS with any questions



Hazard Communication

- Employees have the right to know the physical and health hazards of chemicals in their work area

- Chemical information can be found
  - Safety Data Sheets (SDS)
  - Container Label

- **SDS Contains the Following Information**
  - Hazardous Ingredients
  - Physical Characteristics
  - Fire and explosion hazard
  - Reactivity data
  - Health hazards
  - Precautions for safe handling and use
  - Control measures

Ergonomics

What is it?

Muscleskeletal Disorders (MSDs)

Signs & Symptoms

What can you do?

Evaluations

Problems & Solutions

Safe Lifting

- Definition:

The applied science of equipment design, as for the workplace, intended to maximize productivity by reducing operator fatigue and discomfort. Also called biotechnology, human engineering, human factors engineering.

Design factors, as for the workplace, intended to maximize productivity by minimizing operator fatigue and discomfort:

How are you moving
How do you work with your equipment
How do you work in your environment

Some General Things to improve ergonomics

- **Engineering Controls** - where feasible, are the preferred method for controlling MSD(Muscular skeletal disorders) hazards.
- **Work Practice Controls** - are controls that reduce the likelihood of exposure to MSD hazards through alteration of the manner in which they are performed.
- **Administrative Controls** - are procedures and methods, typically instituted by the employer, that significantly reduce daily exposure to MSD hazards by altering the way in which work is performed.

Signs & Symptoms of MSDs

- Painful joints
- Pain in wrists, shoulders, forearms, knees
- Pain, tingling or numbness in hands or feet
- Shooting or stabbing pain in arms or legs

Back or neck pain
Swelling or inflammation
Stiffness
Burning sensation

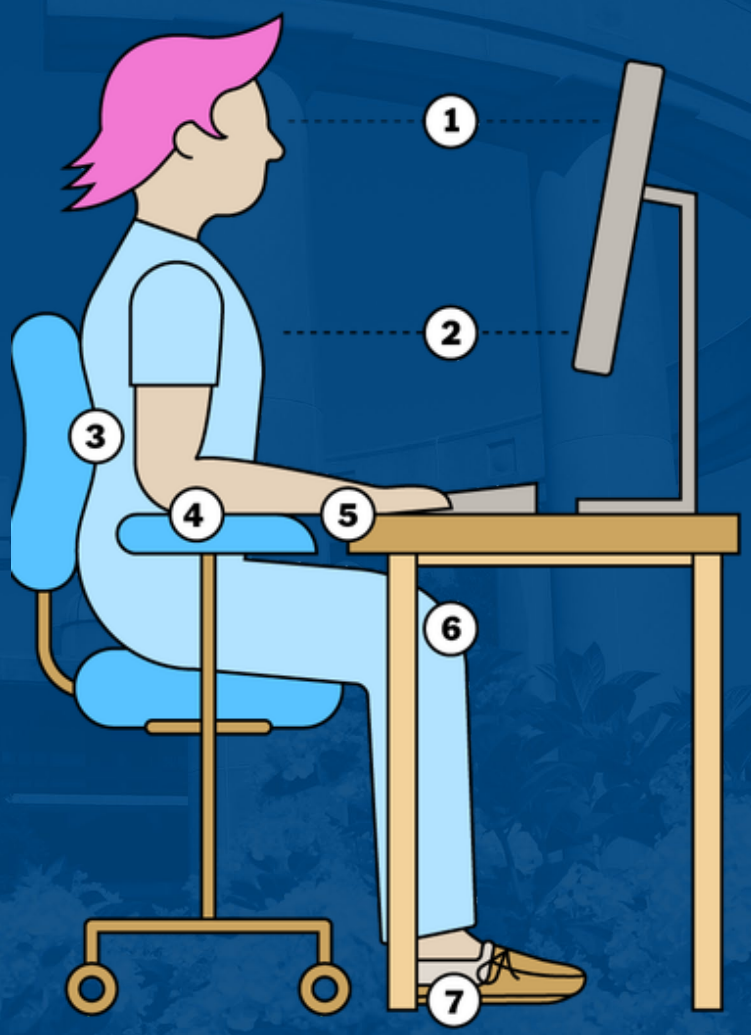
Causes of MSDs

- Repetitive Motions
- Forceful Exertions
- Awkward Postures
- Contact Stress
- Applying Force
- Noise
- Lighting
- Vibration
- Static Posture



What can you do?

- Divide your job tasks so you are not doing repetitive tasks for long periods of time
- Take micro breaks go to
- Listen to your body--do not ignore early symptoms
- Self Evaluate your workstation
- If problems persist contact your manager or EHS for an ergonomic evaluation



1 eye level at the top of the screen or 1 to 2 inches below

2 monitor roughly an arm's length away

3 chair with lumbar support, reclined at 100 to 110 degree

4 elbows bent at 90 degrees or more

5 wrists flat at the keyboard

6 knees level with hips or slightly below

7 feet flat on ground or footrest

Safe Lifting

- Don’t lift more than you are comfortable with
- Lift with your back straight and as close to vertical as possible. Lift with your leg muscles.
- Feet positioned so they are close to the load and balanced when lifting
- Use team lifts where you can -Lift in pairs, 1,2 or 4 people
- Pushing furniture is better than pulling
- Keep the load in front of you and avoid twisting at the waist



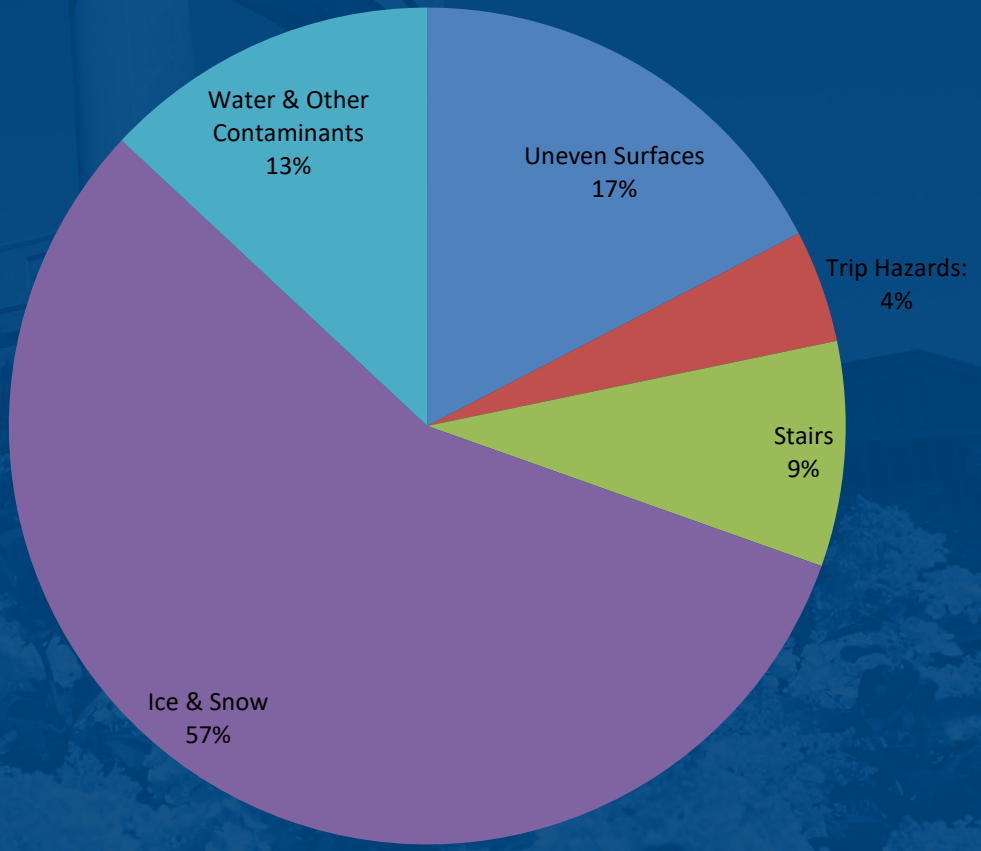
Other Tips

- Strengthen your abdominal and back muscles
- **Use accessories for lifting and carrying** (rollers, dollies, carts, etc.)
- Improve your job tasks to reduce stresses and strains
- Push carts or dollies, don’t pull
- When reaching down, squat instead of bending your back
- When lifting above your shoulder use a footstool or ladder



Slip, Trip and Fall (S,T,F) Awareness

- Slip, trip and fall incidents at work can result in serious injuries that can have a major impact on the employee's ability to do their job.
- Slip, Trip and Falls often result in:
  - Lost workdays
  - Reduced productivity
  - High loss costs



Slips, Trips, & Falls

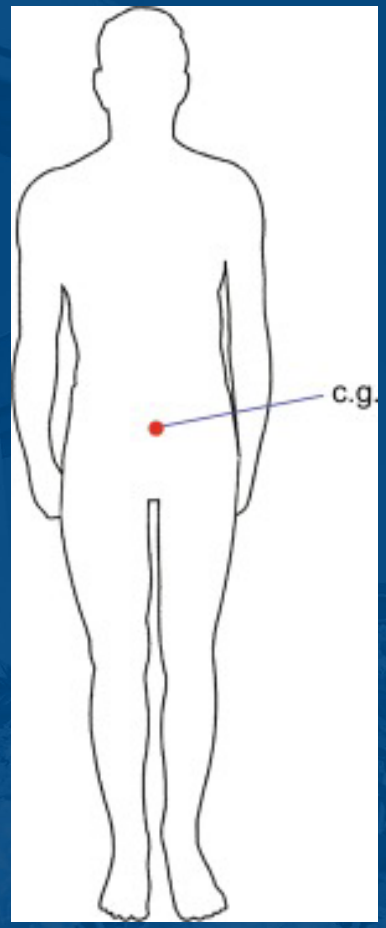
- Falls are among the top causes of disabling work injuries
  - Back & spine injuries
  - Muscle strains or sprains
  - Torn ligaments
  - Broken bones
  - Even death



Center of gravity

- Lower part of spine

- Shifts when:
  - Reach out/above
  - Wear Heels
  - Standing posture : Slouch / straight
  - Carrying something : weight of object
    - Carry close to body



#1 - Ice and Snow:

Where are the hazards:

- Outside walking surfaces
- Building entrances
- Parking Garage entrances

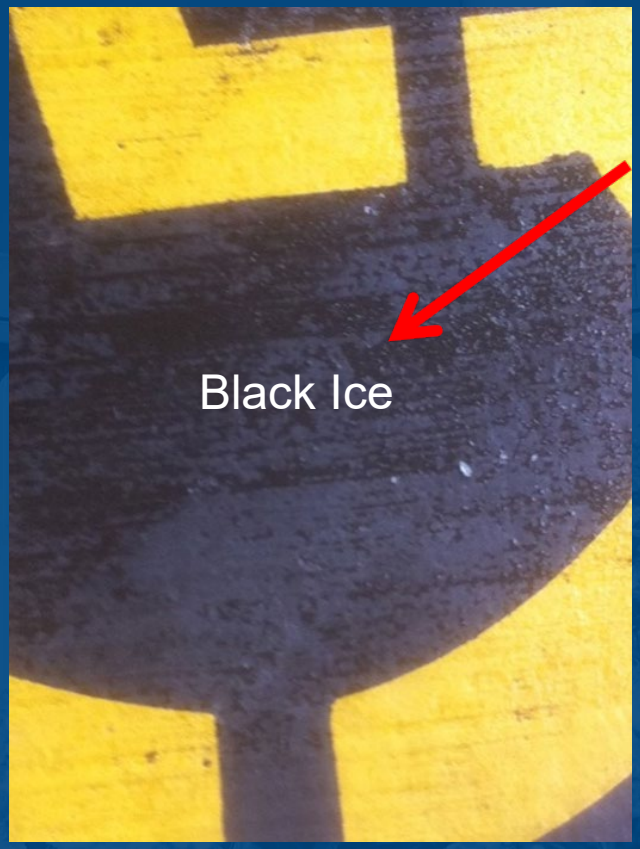
Tips for Walking on snow & ice:

- Plan ahead and give yourself extra travel time.
- Wear proper footwear
- Before getting out of your vehicle, look down at the surface.
- Don’t walk w/ hands in your pockets.
- Take short steps and walk at a slower pace.
- Avoid non-cleared and uneven surfaces.



Ice and Snow:







#2 Uneven surface or poor surface transition:

Where are the hazards?

- Sidewalks
- Parking lots
- Elevator entrances
- Pedestrian ramps

Types of uneven surfaces:

- Pot holes
- Raised grates manholes
- Pitted walking surfaces
- Curbs





Poor Transition



Good Transition



#3 - Water and other Contaminants:

Where are the Hazards?

- Building entrances
- Bathrooms
- Near ice machines
- Near drinking fountains





4 – Stairs:

- **Identified Hazards:**
  - Lacking slip resistant tread or coating
  - Deteriorating stairs
  - Low visibility markings

Tip: Use handrail when ascending or descending stairs, steps or ramps.



5 - Tripping Hazards:

Identified Hazards:

- Extension cords
- Desk drawer
- Loose rugs
- Equipment in walking path



Prevention of slip, Trips & Falls

- Pick up tools, materials, and trash
- Walk around obstructions
- Do not carry items that block your forward vision
- Watch placement of power cords
- Keep file drawers closed





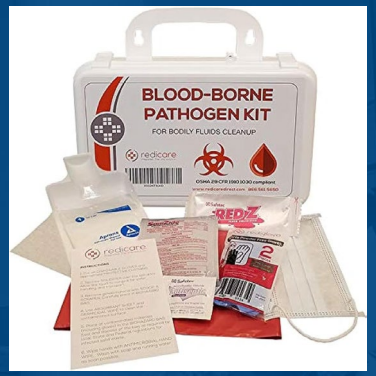
What you can do to help prevent slip, trip and fall injuries?

- Pay attention!
  - Do not read or text while you are walking.
  - Be familiar with your surroundings!
- Wear the appropriate footwear.
- Walk, don't run or rush.
- Manage equipment & cords to prevent trip hazards.
- Clean-up water and other contaminants
- Place warning sign over spill



Emergency Management

- Spills
  - Oil Spill- SPCC
  - Body Fluid – BBP awareness
- Drills
  - Fire Drills – EHS
  - Tornado – what to do?
  - Armed Intruder – What to do?







UNIVERSITY OF ILLINOIS | SPRINGFIELD

Emergency Preparedness

Emergency Response

- UIS Police manage the overall Emergency Response Plan.
- Emergency: 217-206-7777
- Non-Emergency: 217-206-6690
- Spill Response: 217-206-8062 (EHS)





Natural Hazards

Severe Weather

Tornado

Flood

Drought

Extreme Heat

Severe Weather Storm

Earthquake





Technological Hazards:



Hazardous Materials – Chemical

Hazardous Materials – Radiological

Dam Failure



Human-Caused Hazards:

Terrorism – Chemical, Biological, Radiological, Nuclear and Explosives (CBRNE)

Civil Disturbance

Cyber Attack

Agriculture Epidemic (NOS)

Public Health Epidemic (NOS)







Questions

?