

Tornado Safety

The National Weather Service recommends taking these safety measures in the event of an impending tornado:

- In the event of a tornado, lie down in a ditch. If you are already lying in a ditch, do not attempt to sit up
- The most important thing is to stay calm. This will be difficult, since you are almost certainly going to die
- Tornadoes spook easily. Firing a few warning shots into the air is usually enough to scare them off
- Live a little for once: strap yourself to the roof of your house and rage at the heavens
- Prevent tornadoes before they happen: make sure that warm, moist air fronts do not converge with cool, dry ones
- During a tornado, the only safe place is in my loving arms. Come here, baby
- If a tornado strikes your home, even your basement could be dangerous, so construct a basement for your basement
- If you spot a tornado, always remember to point at it, yell "tornado!" and run like hell

Disaster Exercises - Keeping Your Facility Fit Through Regular Workouts



Crystal Kline, MEP, CFM

City of Tulsa

Phases of Incident Management Activities

Notification



Examples

Recovery

Mitigation

- Implementation of structural and non-structural mitigation measures
- Vulnerability Assessments
- Public education—family disaster plan, disaster kits, business contingency planning, etc.

Preparedness

- Pre-deployment of response assets
- Exercises—drills, tabletops, etc.
- Pre-establishment of ICPs, JFO, staging areas and other facilities
- Evacuation and protective sheltering

Response

- Emergency shelter, housing, food & water
- Search and rescue
- Evacuation
- Emergency medical services
- Decontamination following a WMD attack
- Removal of threats to the environment
- Emergency restoration of critical services

- Repair/replacement of damaged public facilities (bridges, schools, hospitals)
- Debris cleanup & removal
- Temporary displacement
- Restoration of public services
- Crisis counseling
- Programs for long-term economic stabilization and community recovery

Exercise is part of preparedness

- Without exercise, we can't expect to become strong, to endure
- Without exercise, we can't expect to work together as a lean mean disaster fighting machine
- Without exercise, the response will become the second disaster

Benefits of Exercising

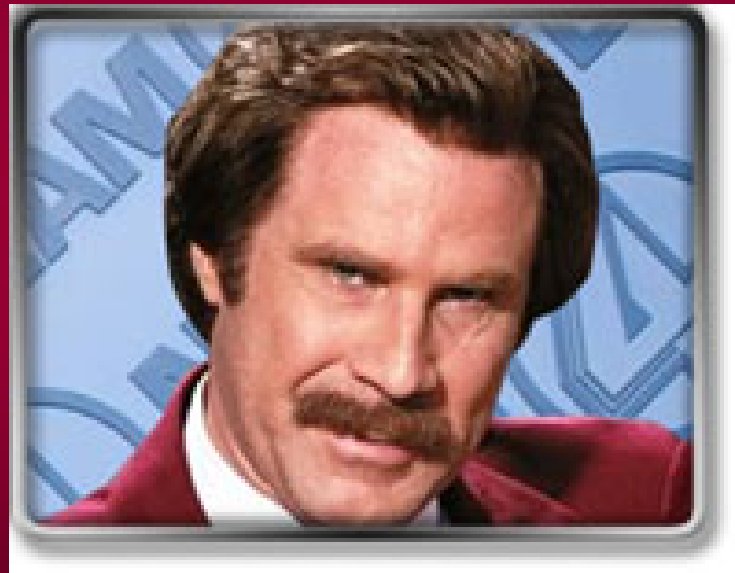
- Provides individual training
- Provides team training
- Leads to system improvement



What are some specific reasons to conduct exercises?

NOT Reasons to Exercise

- To look good



"Hey, everybody—Come see how GOOD I look!"

Reasons to Conduct Exercises

- Test and evaluate plans, procedures, and policies
- Reveal planning weaknesses and gaps in resources
- Improve inter-agency coordination and communications
- Clarify roles and responsibilities

Reasons to Conduct Exercises

- Gain public recognition
- Gain support of officials and civic leaders
- Satisfy government requirements
- Deter attacks
- Provide realistic training

Why Exercise ?

- 1998 PennDot building implosion provided opportunity for a PA TF-1 USAR full scale exercise on a building collapse scenario.



Why Exercise ?

- Pa USAR Team responded to WTC





Why Exercise?

- Recovery is still underway in Oklahoma City today
- 50 % of all businesses with less than 200 employees never reopen after a disaster
- Community spirit helps guide a community through the disaster
- Most people live through one major disaster in their lives so on the job training is rare



Why Exercise?

- **UAL 232 crash (Sioux City):** Problems revealed in full-scale exercise had been corrected.
- **Loma Prieta Earthquake:** Effective response was preceded by earthquake exercise
- **Airgas (Tulsa):** Effective response was preceded by exercises—example of what to do right



Exercising the Brain--People Respond the Way They are Trained

Time Magazine, April 25, 2005

"How to Get Out Alive—

From hurricanes to 9/11: What the
science of evacuation reveals about
how humans behave in the worst of
times"

People Respond the Way They are Trained

“Whether they’re in shipwrecks, hurricanes, plane crashes or burning buildings, people in peril experience remarkably similar stages. And the first one—even in the face of clear and urgent danger—is almost always a period of intense disbelief.”

People Respond the Way They are Trained

“People who made it out of the World Trade Center waited an average of 6 minutes before heading downstairs.”
(Some waited as long as 30 minutes)



People Respond the Way They are Trained

Problem—lack of data. “Our brains require 8-10 seconds to handle each new piece of information. The more stress, the slower the process. Bombarded with new information, our brains shift into low gear when we need to move fast.”

People Respond the Way They are Trained

People caught up in disasters fall into 3 categories:

- 10-15% remain calm and act quickly and efficiently
- 15% completely freak out (weeping, screaming, hindering the evacuation)
- The rest of the crowd are stunned, bewildered, and do very little
- Reactions are not predictable based on a person's every day personality

People Respond the Way They are Trained

Why do a few react calmly and quickly when most freeze?

Many who make it out of disasters alive do something most others don't—They go onto a plane, or into a theater, or their workplace and they study the exits—they imagine the scenario ahead of time, enabling themselves to work on automatic when the time comes to act, instead of wasting precious moments processing information. **They exercise mentally.**

People Respond the Way They are Trained

Many of those people had been through disasters before, sometimes several.

This shows people can be trained to respond properly in a disaster, and that is the best reason to exercise.

People Respond the Way They are Trained

"Even in the World Trade Center, which had complicated escape routes and had been attacked once before, preparation levels were abysmal, we now know. Fewer than half the survivors had ever entered the stairwells before."

People Respond the Way They are Trained

Only 45% of 445 Trade Center workers interviewed before 9/11 knew the buildings had three stairwells. Only half had known the doors to the roof would be locked.

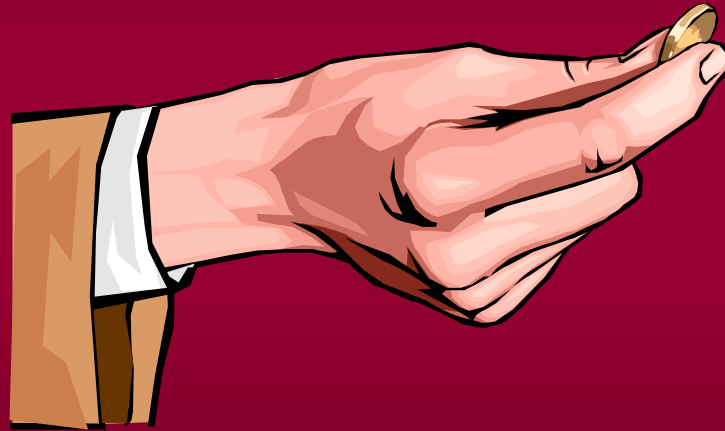
• “We did not anticipate that airliners would be commandeered and turned into guided missiles; but the fact that we practiced for other kinds of disasters made us far more prepared to handle a catastrophe that nobody envisioned.”

• --Rudolph W. Giuliani

Former New York City Mayor



Why Exercise?



- The terror attacks on the United States brought 2001's global disaster losses to more than \$115 billion
- The September 11 attacks cost an estimated \$90 billion, of which \$19 billion was insured
- More than 33,000 people died as the result of disasters in 2001, almost half of those in an earthquake in India
- At over \$115 billion, the economic losses were more than three times the annual average for the 1990s





Functions

- Alert/Notification (Emergency Response)
- Emergency Management (EOC)
- Warning (Public)
- Communications
- Coordination and Control
- Emergency Public Information
- Damage Assessment



Functions

- Health and Medical
- Individual/Family Assistance
- Public Assistance
- Public Safety
- Public Works/Engineering
- Transportation
- Resource Management
- Continuity of Government
- Intelligence

The Plan

- Exercises must be designed to test the community or business emergency/disaster plan



"Someday we hope to have a budget."

The Plan

- Exercises have measurable objectives
- Exercises must evaluate if objectives are achieved.





5 Elements of a Progressive Exercise Program

- Orientation Seminar
- Drill
- Table Top
- Functional
- Full-Scale





Progressive

- Long term program
- Long-range goals
- Progressively more challenging
- Series of exercises results in improvement over time



Exercise checklist

ELEMENTS:

- Format, Facilitator, Participants
- Facility, Time, Purpose
- Preparation,
- Conduct



Drill

Useful for:

- Practice and perfection of a single emergency response
- Concentrating the efforts of a single agency or department
- Providing field experience



Tabletop Exercise

Useful for:

- Lending themselves to low-stress discussions of plans, policies and procedures
- Providing an opportunity to resolve questions of coordination and responsibility

Tabletop Basics

- Agenda, housekeeping, rules
- Purpose
- Objectives
- Scenario (simple)
- Problem statements (3 or 4)
- Discussion after each problem statement
- Evaluation
- *Corrective action and follow-up*

Exercise Evaluation Plan



Evaluation Plan Features:

- 1. Objectives
- 2. Points of Review
- 3. Evaluation forms
- 4. Observational locations

When planning an exercise, things for participants to think about:

- How do we incorporate the disabled into our planning?
- What is our evacuation/SIP plan, and how do we know it will work?
- What are our options when phones are down?



When planning an exercise, things for participants to think about:

- What do we do when our government leaders at the state, local and federal levels aren't communicating with each other?
- How do we protect ourselves from terrorist attacks while still vulnerable from a natural disaster?
- What do we do when civil unrest threatens to hamper response/recovery efforts?

Let's get fit!



Crystal Kline, City of Tulsa

596-1271

Ckline@cityoftulsa.org