

# Protecting the Health, Safety & Resiliency of Emergency Responders

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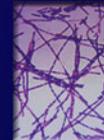
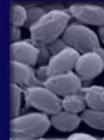
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**Workforce and Responder Resiliency Team**

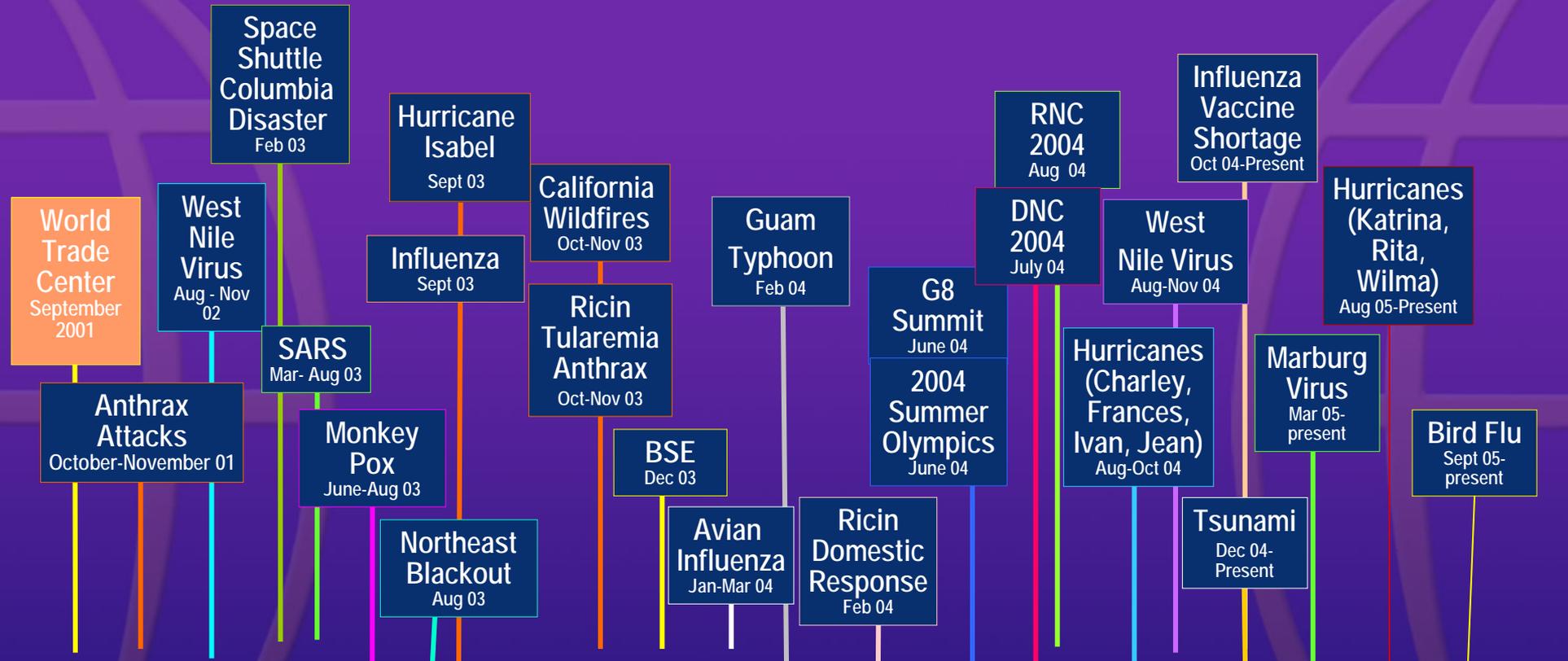
**CDC, OCOO, Office of Health and Safety**

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# Potential Generators of Traumatic Stress



**Note:** The ideas and opinions expressed in this presentation are those of the presenter and they do not necessarily reflect the position of CDC, OHS or DHHS. 2

# Marburg Hemorrhagic Fever in Angola & tsunami response at Wat Yan Yao in Thailand.



# Wildfires raging in California. Visitors to a park in Beijing, China 4/17/06. Impact on responder?



# One Definition of Resiliency

**“the ability to recover quickly from illness, change or misfortune; buoyancy.”**

American Heritage College Dictionary

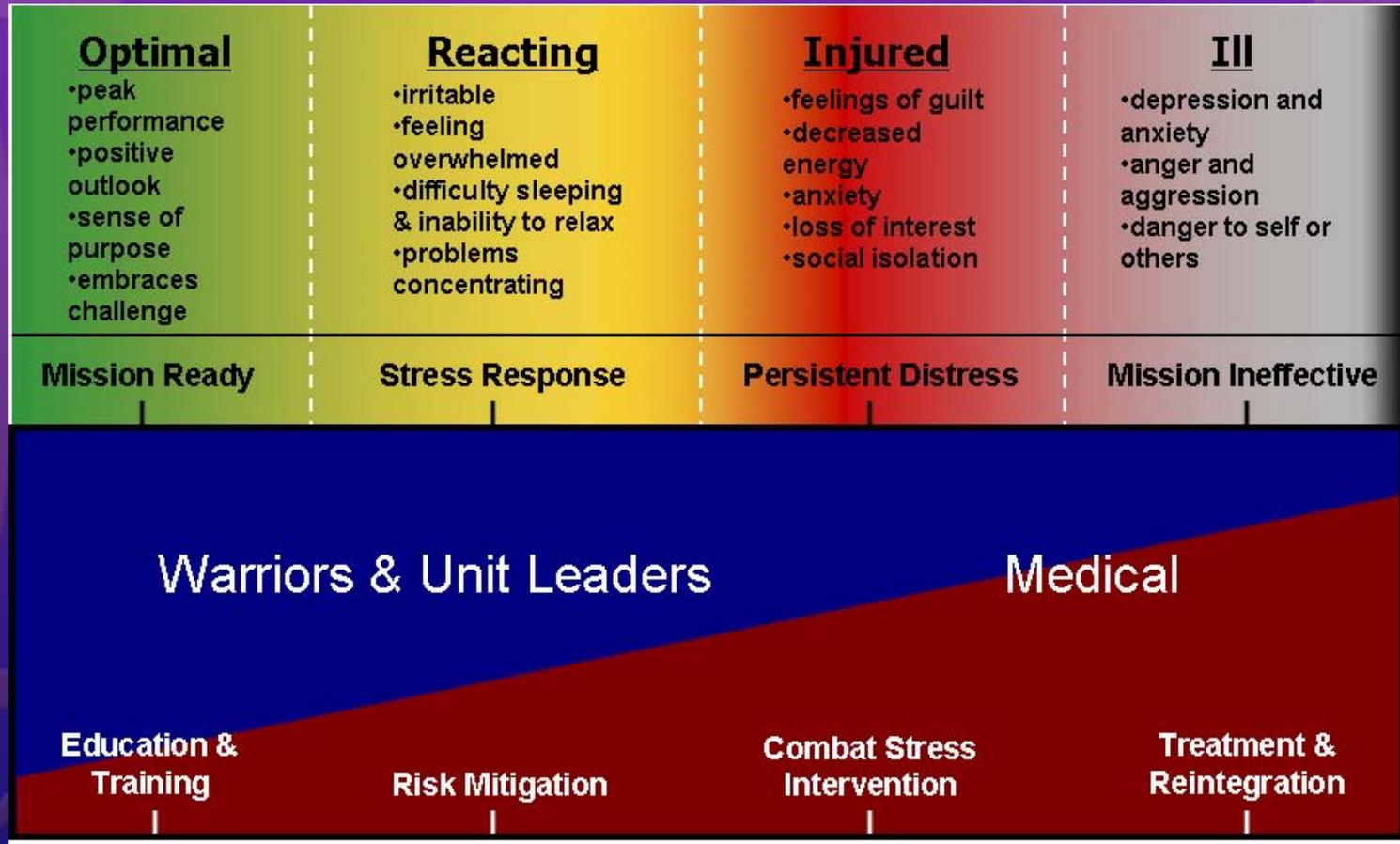
# Other Definitions of Resilience

- “In **physics & math**: the speed with which a material or system returns to equilibrium after displacement.
- In **ecology**: the persistence of relationships within a system; ability to absorb change & persist.
- In **psychology**: the process of successful adaptation despite challenging circumstances.
- In **sociology**: the ability of social units (communities, cities) to withstand external shocks to their infrastructure.”

# Resilience Continuum

RESILIENCE

RECOVERY



**RECOVERY**

# Changing Organizational Approach

## Then:

- Small groups of seasoned staff infrequently sent to field
- Emergency response was smaller part of CDC mission

## Now:

- CDC implementing major **culture shift** (expanded mission)
- CDC more engaged in response (WHO, FEMA, DHS)
- More CDC staff involved in emergency response
- During Katrina response +/- 51% inexperienced
- Increased # of participants = increased # at risk

**Conclusion:** CDC can do even more to protect workers

# Stress Basics

## Definition of Stress:

**“A perceived inadequacy of resources necessary to meet the demands of a specific situation.”**

**Dr. Ken Matheny, GSU**

- **Normal**
- **Necessary**
- **Productive & destructive** (“Eustress” Hans Selye)
- **Acute and delayed**
- **Cumulative**
- **Identifiable**
- **Manageable** (some is preventable)

# Individual Responses

## Physiological Signs of Stress

Fatigue

Nausea

Fine motor tremors

Tics

Paresthesia (numbness, tingling)

Profuse Sweating

Dizziness

GI Upset

Heart Palpitations

Choking or  
smothering  
sensation

# Individual Responses

## Behavioral & Emotional Signs of Stress

Anxiety

Grief

Irritability

Feeling overwhelmed

Anticipation of harm  
to self or others

Insomnia

Gait change

Hyper-vigilance

Crying easily

Gallows humor

Ritualistic  
behavior

# Individual Responses

## Cognitive Signs of Stress

Memory loss

Anomia

Decision making difficulties

Confusing trivial with major issues

Concentration problems/distractibility

Reduced attention span

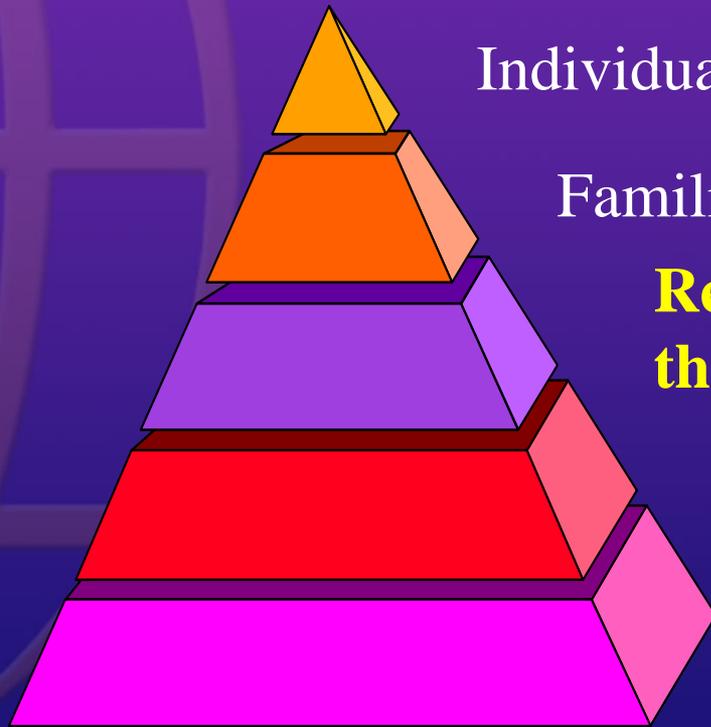
Calculation difficulties

# Sources of Stress In Teams

- Role ambiguity (lack of clarity of mission or tasking)
- Poor (one-way or negative) communication
- Lack of Team Cohesion
- Discomfort with the unknown
- Comfort level with personal risk
- Backlog of accumulated stress combined with acute stress of mass casualty response
- Degree of cultural “fit”

# Who is Affected?

## The Impact Pyramid



Individual victims

Families and social networks

**Rescue workers, soldiers,  
their families & social networks**

Vulnerable populations  
and impacted businesses

Ordinary people and their  
communities

# Primary Traumatic Stress

**Direct exposure to, or witnessing of, extreme events and one is overwhelmed by the trauma.**

(Figley, 1992 at the 1<sup>st</sup> ISTSS Conference)

NCPTSD

The ISTSS says that **Traumatic Stress** is a function of experiencing or witnessing “Traumatic events [that] are shocking and emotionally overwhelming.” They say it is “natural for people who experience or witness them to have...intense fear, horror, numbness...anxiety, terror, shock and upset.” These reactions can range from relatively mild to severe and debilitating. They can be generated by one-time occurrences (house fire, violent crime) or ongoing situations (war, domestic violence, child abuse.) [http://www.istss.org/resources/what\\_is\\_traumatic\\_stress.cfm](http://www.istss.org/resources/what_is_traumatic_stress.cfm)

# **Secondary Traumatic Stress**

**Direct exposure to extreme events  
directly experienced by another and  
one is overwhelmed by the trauma.**

(Figley & Kleber, 1995)

NCPTSD

# Vicarious Traumatization

**The phenomena of transmission of traumatic stress by bearing witness to the stories of traumatic events.**

(McCann & Pearlman, 1990)

VT is considered a natural and inevitable response to spending significant time working with, or studying, trauma survivors...

The transformative effect upon the provider of working with survivors of traumatic events. A process through which the provider's inner experience is **negatively transformed** through empathic engagement with the client's trauma material.

(Pearlman & Saakvitne, 1995)

NCPTSD

# Compassion Fatigue (CF)

Is the Cumulative Build Up Over Time Of:

- **Primary Stress** (direct trauma experience of provider)  
*PLUS*
- **Secondary Stress** (direct witnessing of other's trauma)  
*PLUS*
- **Vicarious Traumatization** (hearing other's trauma stories)  
*CAN EQUAL*
- **Compassion Fatigue**

NCPTSD

# Compassion Fatigue (CF)

Sufferers can exhibit symptoms such as overall decrease in experiences of pleasure, constant stress and anxiety, and a pervasive negative attitude. This can lead to detrimental effects, both professionally and personally, including a decrease in productivity, the inability to focus, and the development of new feelings of incompetence and self doubt.

# **Burnout**

**A state of physical, emotional, mental exhaustion caused by long term involvement in emotionally demanding situations.**

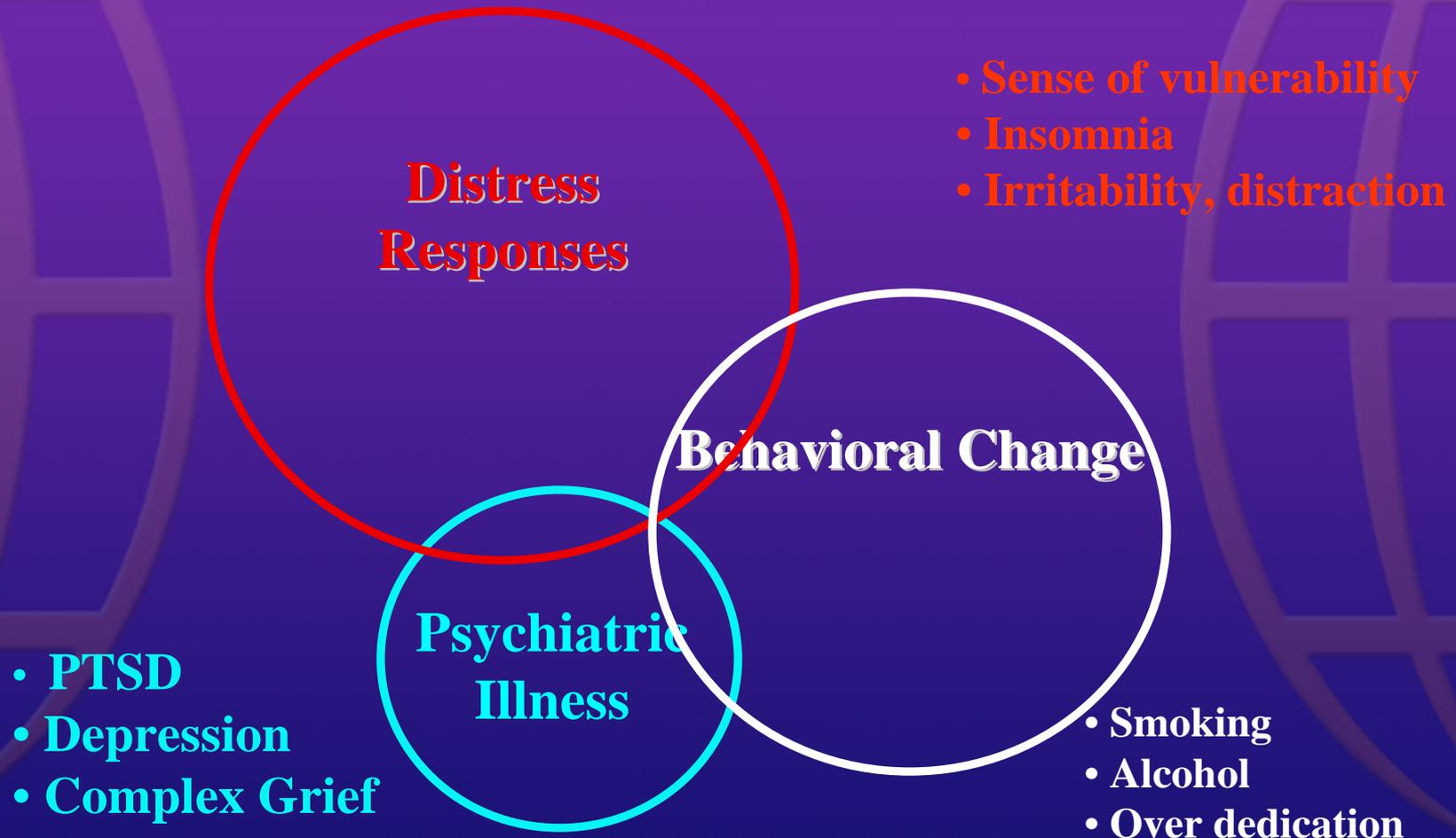
(Pines & Aronson, 1988)

NCPTSD

# Burnout/CF Risk Factors

- Professional isolation
- Exposure (duration, intensity, proximity, severity)
- Emotional/physical drain of continuous empathy
- Ambiguous success; Erosion of idealism
- Lack of expected rewards
- Helpers may also be survivors
- “Unresolved trauma” from the past
- Continuous vulnerability
- Victim comparisons to family members (children)

# Traumatic Exposures and First Responders



# Pilot Project Development

- To conserve resources/build collaboration CDC contacted:  
**ATF, Border Patrol, USCG, DEA, EPA, FBI, NASA, DoD**
- Reviewed approaches to protecting staff in harm's way
- Identified common elements/best practices/bench marks
- Consulted SMEs at CSTS @ USUHS & VBI
- Realized integration w/ICS important (responder's language)
- Model similar to Army Medic (nonclinician; not surgeon, can do lots)
- Stand-alone MH approach risky (dis-integrated/"not us" = not good)
- Must support roles/duties of Field Team Leader
- Should harmonize with CDC's prevention focus
- Conceived of way to assess/address needs in the field

# Key Elements of DSRT Pilot

**2. Safety Basics:  
OSHA 7600-Disaster Site  
OTI 6000-Collateral Duty**

**3. Virtual Reality to  
increase preparedness &  
reduce stress & anxiety**

**1. Resiliency Training.  
Psychological First Aid.  
Peer Support. Coping Skills  
Assessment/Triage.  
Proper Referral Protocols.**

# 1. Resiliency

- **DSRT pilot project instruction includes:**
  - **Definitions of resiliency**
  - **Risk factors; protective factors**
  - **Conditions that support resiliency**
  - **Physio., cog., behav., emot., signs of stress**
  - **“The Road to Resilience” (10 things to do)**
  - **Relaxation Response vs Stress Response**
  - **Importance of self care; Self Care Plan**

# Resiliency cont'd

## Psychological First Aid (PFA) Core Actions:

- **Contact and Engage**
- **Establish Safety & Comfort**
- **Stabilize**
- **Gather Information Re: Needs & Concerns**
- **Provide Practical Assistance**
- **Connect them with Social Supports**
- **Share Information on Coping**
- **Link with Collaborative Services**

## 2. Basic Safety Training

- Safety focus limited to immediate deployed team
- No expectation to function as full Safety Officer
- Training in basics consistent with DSRT mission
- Training includes a customized version of:
  - OSHA 7600 (Disaster Site Worker Course)
  - OTI 6000 (Collateral Duty Course for Fed Agencies)
- Training consistent with OSHA, NIOSH & OHS

# Practice with PPE



# Simulating Fire Suppression



# 3. Virtual Reality Training

## Assumptions & Approach

- Actual experience in country would be ideal
- When not possible, virtual exposure helpful
- Designed simulated environment for deployees
- Solicited input from seasoned travelers
- Want to provide equivalent of emotional vaccine
- Partners at VBI pioneered VR in PTSD treatment
- We're expanding that work for prophylactic use

# Virtual Reality Training cont'd

- **Intent**

- Provide advance “view” of likely situations
- Emphasize and integrate importance of collaboration
- Develop cadre of trained, prepared deployees
- Increase confidence & competence
- Decrease anxiety & stress of unknown

- **Process**

- Include relevant sights, sounds & smells
- Reach out to CIOs, Offices etc. (content; staff)
- Select appropriate individuals for DSRT
- Continue to refine, improve Deployment Safety & Resiliency T.

# Translation from Live to VR



# Including Olfactory Stimuli



# **Elements to Help Build Resilience**

- **Connectedness, commitment, shared values**
- **Participation**
- **Structure, roles, and responsibilities**
- **Support and nurturance**
- **Critical reflection and skill building**
- **Resources**
- **Communication**

**“Building Community Resilience for Children and Families”**

Produced by CDC, TDC, NCTSN by Gurwich, Pfefferbaum, Montgomery, Klomp, Reissman

# 5 Factors to Help Build Resilience

- **Safety**
- **Calming**
- **Sense of self and community efficacy**
- **Connectedness**
- **Hope/Optimism**

From **Dr. Patricia Watson**, NCPTSD, Waikoloa, Hawaii, USA,  
shared on 11/13/08 at ISTSS Conference (Terror and its Aftermath) in Chicago

# **Social Support**

**“Social support is related to emotional well-being and recovery following disaster and terrorism.**

**People who are well connected to others are more likely to engage in supportive activities (both receiving and giving support) that assist with disaster recovery.”**

# Forms of Social Support

- **Emotional Support**—A listening ear, acceptance...
- **Social Connection**—Feeling like you fit in
- **Feeling Needed**—Feeling you are valued/appreciated
- **Reassurance of Self-Worth**—Have confidence built up
- **Reliable Support**—Being reassured you can rely on ‘em
- **Advice and Info**—Good examples and reliable input
- **Physical Assistance**—Help performing tasks..
- **Material Assistance**—Having people give you things

# 10 Ways to Build Resilience

1. Make connections (relationships)
2. Avoid seeing crises as insurmountable
3. Accept that change is part of living
4. Move toward your goals
5. Take decisive actions
6. Look for opportunities for self-discovery
7. Nurture a positive view of yourself
8. Keep things in perspective
9. Maintain a hopeful outlook
10. Take care of yourself

from APA's "The Road to Resilience"

# Self Care

- **Physical** Diet, exercise, sports, sleep, relax.
- **Emotional** Family, friends, social support
- **Cognitive** Training, reading, perspective
- **Behavioral** Civic involvement, personal & family preparedness
- **Spiritual** Meditation, prayer, fellowship, volunteerism

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<http://ncdmhr.org/>
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- The National Center for Post-Traumatic Stress Disorder (Dept of Veterans Affairs)  
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