

A special lecture by:  
THE MIT ZOMBIE DEFENSE INITIATIVE



# ZDI.001: INTRODUCTION TO ZOMBIE DEFENSE

# WHAT IS A ZOMBIE?



- **INFECTED:**
  - Neurovirus
  - Neurotoxin
  - Neurofungus
  - Neural Nanobots
  - Neural Parasite
- **DANGEROUS PROPERTIES:**
  - Aggression
  - Hunger for flesh
  - Pain tolerance, lack of self-preservation
  - Lack of sentiency
  - Exceptional strength/speed (sometimes)
  - Nonfunctional organ systems (sometimes)
- **The Rabid Animal Analogy**

# KNOW YOUR ZOMBIE

- PAY ATTENTION TO:
  - SPEED
  - Intelligence
  - Vector of contagion
  - Method of execution
  - Origin (if known)



# EXAMPLE: HALF LIFE 2

KILL THIS PART



Parasite: Controls  
And feeds on Host



# EXAMPLE: I AM LEGEND



Smart, Tough, Fast,  
Vicious, Social...

Still Pretty Lame.

Also, Airborne → You're Boned NO Matter What



# EXAMPLE: DAWN OF THE DEAD



Pack Behavior



Neurologically Broken

# Learn how to kill



- Process of Elimination:
  - 1) Torso—It's Easy
  - 2) Head—Hard, but Likely
  - 3) Heart
  - 4) Lots of Fire—effective, but resource-taxing

# Estimate Intellect



- Series of Tests:
  - 1) Can it Open a Door?
  - 2) Does it Wander, or Hunt?
  - 3) Alone, in a Large/Small Group?
  - 4) What senses Does it Rely Upon?
  - 5) Susceptible to Fear?
  - 6) Does it Take Small Animal Bait?



# Pathogen Matters



- If Parasite...
  - Parasite should be attacked.
  - Removal may be Cure.
- If Viral...
  - Probably still needs vital organs
- If Nano-Bots...
  - Utilize radiation or magnetism
- If Fungal...
  - It is airborne! Cover Face.
- If Toxic...
  - Probably Dies Like Normal Animal

# TRANSMISSION MATTERS



- Generally: Avoid Carcasses
- IF BLOODBORNE:
  - Protect extremities from bites.
- IF BODY LIQUID-BORNE:
  - Same as above.
- IF WATERBORNE:
  - Stay very dry; drink bottled water
- IF AIRBORNE:
  - Cover face; gas mask?
  - ASSUME YOU ARE INFECTED.

# ZOMBIE COMBAT/TACTICS



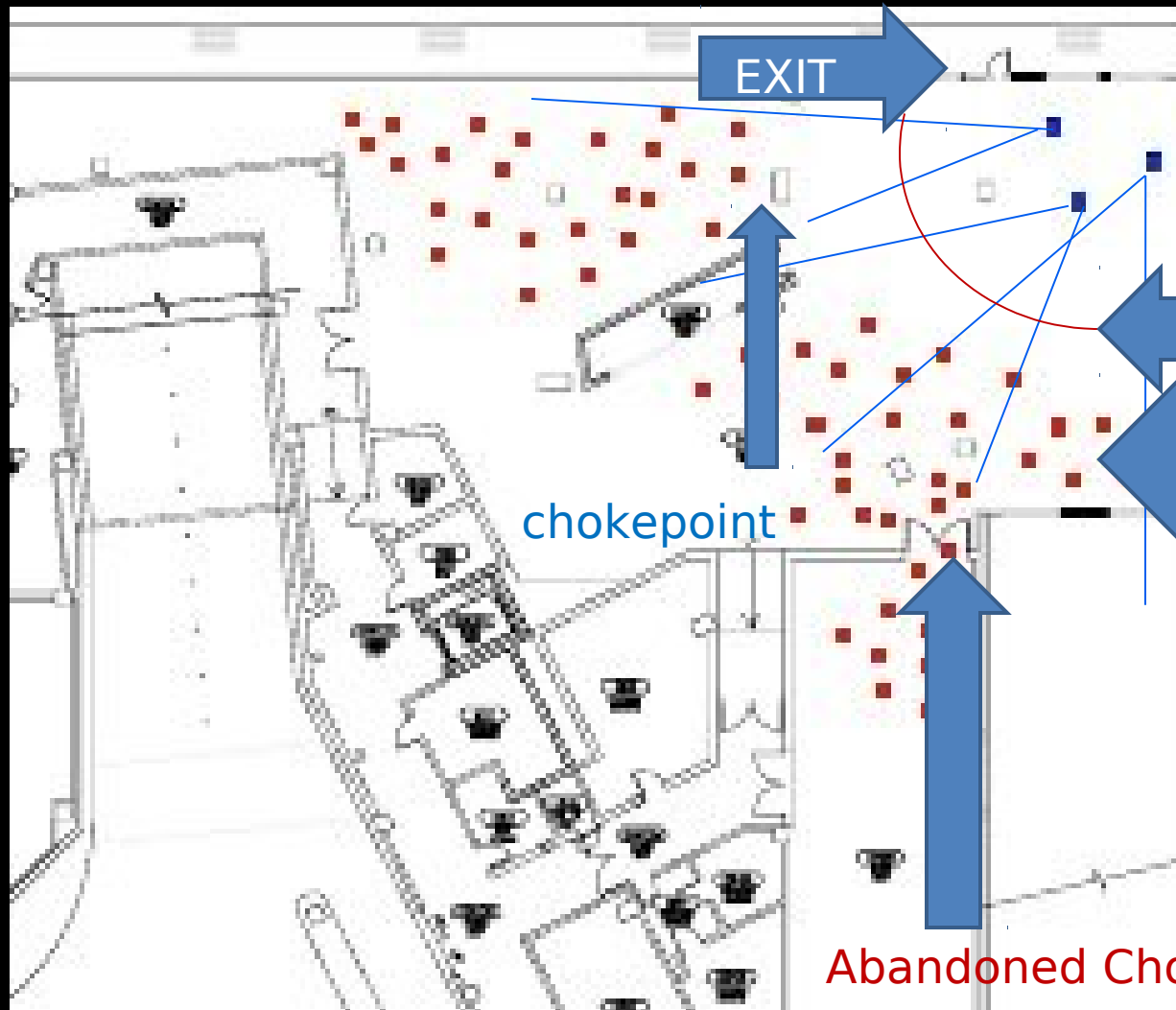
- MOST IMPORTANTLY:
  - KNOW WHEN TO RUN
  - YOU ARE TRYING TO SURVIVE
    - Not TRYING TO KILL ZOMBIES
    - NOT TRYING TO SAVE HUMANITY ALONE
  - COMBAT IS A LAST-RESORT
    - But probably a common one
    - Fight to clear paths to safety
    - Combat is exhausting

# Superior positioning



- High ground
  - ...unless they can climb.
- Choke points, tunnels
  - Always have an exit—this is not the Alamo.
- The danger of open space
- Stay away from shadows/nooks

# Example: fire arcs



YOU

Bugout Line

ZOMBIE HORDES

Abandoned Chokepoint



# Utilize zombie weaknesses



- Scent-dependent
  - Burn tires or other petrochemicals
- Hearing-dependent
  - Throw loud objects
  - Set off timed firecrackers
- sight-impaired
  - Use strobes
  - Move through soft shadow



# Ad-hoc armor

Protect vulnerable limbs, neck from attack

- Lacrosse/ hockey pads
- Leather coat
- Leather gloves
- Neck guard



BEWARE HEAT EXHAUSTION!

# Melee weapons



- Slashing
  - Long blades
  - Short blades
  - Halberds
- Bludgeoning
  - hammers
  - Crowbars
  - Bats
  - pipes
- Piercing
  - Pikes/spears
  - Ad-hoc: sharpened wooden posts
- Burning
  - Stick on fire. Simple, really.



# Melee techniques



- Do not be surrounded
  - Keep distance from zombie mass
- If solo, always retreat
- If in groups, put backs to backs
- Attack the head
- Know the terrain
- Keep your cool

# Ranged weapons



- Longarms:
  - Hunting rifle
  - Semiautomatic rifle
  - Automatic rifle
  - Shotguns
- Handguns:
  - Revolver
  - Semi-automatic
  - SMG
- Heavy machine guns





# Ranged techniques



- Know your firearm
- Keep track of ammunition
- Communicate with teammates
  - Give teammates time to reload
- Fall back in waves
- Discharging draws attention—vacate afterwards
- Conserve ammunition
  - Prioritize threats
  - Concentrate on moving, not shooting
- Fire slow and well: keep your cool.

# Special weapons



- Thrown Explosives
- Molotov cocktails
- Do-it-yourself napalm
- Trap explosives
  - Triggering mechanisms
  - Placement
  - Timing
  - thermite



# SURVIVAL



- Goal: Get to a safe place with other people and supplies
- Strategy depends on depth of crisis
  - 1) outbreak
  - 2) martial law
  - 3) societal collapse
- If you might be a vector, self-quarantine

# Survival checklist



- SURVIVAL IS ACADEMIC
  - Assess
  - Congregate
  - Acquire
  - Depart
  - Establish
  - Maintain
  - Investigate
  - Communicate

# Assess



- Know your zombie
- Determine depth of crisis
- Have a radio on hand
- Determine whether army has safe zones
- Determine risk for movement outside
- Check inventories
- Contact other zdi members



# Congregate



- AGREE ON A TEMPORARY MEETING TIME AND PLACE
  - Have punt locations ready
- Have open communications with your comrades

# Acquire



- Have a comfortable backpack
- Wear durable, climate-appropriate clothing
- Wear armor, keep weapons on hand
- Pack one week of supplies
  - Bottled water
  - Energy bars
  - Ammunition
  - Batteries & radios

# Depart



- Leave urban areas quickly
  - They will be total chaos and death
- Note current season and prepare
- Head for water and board a boat
  - Make sure it is wind-powerable
  - Then, look for an island
- Otherwise, head for wilderness
  - Look for army bases, barracks, etc
  - Gps satellites should still work!
  - Make reasonable self-quarantine period
- Have a planned destination
  - Prepare for combat
  - Avoid exhaustion

# Establish



- Create a long-term living space
- Island should be sustainable
  - Plants and animals to hunt/forage
  - Potential for farms if soil is good
- Bunker should have stores for years
  - Non-perishable foods
  - Fuel for generators
- Electricity would be nice
  - Unlikely...

# Maintain



- Initiate patrols or surveillance
  - Look for incoming zombies/survivors
  - Make sure to quarantine survivors
- If resource stores are low...
  - Conduct careful raids
  - Look to fuel depots, wal-mart, grocery stores
  - Move quickly, take what is necessary, flee
  - Make sure zombies do not follow
- Maintain morale
  - Keep exhaustion and despair from taking over
- Improve defenses
  - Build physical barriers



# investigate



- Look for survivors in area
- Have beacons
  - Radio, especially early
  - Signs, but avoid blaring sound
- Seek out authority
  - Remnants of army likely survived
  - Authority likely instructing on radio
- Maximize safe territory
  - Identify any local zombie pockets
  - Look for resources / farmland
- Stay up to date with endemic
  - Are zombie numbers diminishing?
  - Do they seem to be dying naturally?

# Communicate



- When contact is established:
  - Learn locations of other colonies
  - Learn status of other colonies
  - Create expanded plan
- Expanded plan – New Civilization
  - Find single location able to support all
    - Should be safe, climate-friendly, farmable
  - Identify inventories and assign cargoes
  - Prepare Exodus to new civilization site
  - Set up new authority and assignments
  - Try to preserve mass of human knowledge

# Disaster scenario: MIT Under Attack





# Disaster scenario: Escape Routes

