

Improvised Explosive Device (IED) Attack

Note: This document deals with surviving (hopefully) an attack. If you're trying to set up an attack, keep searching.

Notes from TEEEX WMD Per 304

Chemical reaction – rapid release of energy

Compressed air

Positive pressure – everything pushed out

Negative pressure – fills vacuum

Factors affecting injury

Body position

- lying down
- standing upright

Proximity

- close to blast
- far away

Blast environment

- open area
- enclosed

Body orientation

- facing blast
- facing away

PSI

1 – knocked down

5 – Pos. eardrum rupture

15 – 50% eardrum rupture

30 – Pos. lung injury

75 – 50% lung injury

100 – Lethality threshold

130 to 180 – 50% lethality threshold

200 to 250 – almost 100% lethality

High Velocity – HE

3300-30,000fps

Brisance – shattering effect

Tend to detonate not deflagrate

Low Velocity – LE

Less than 3300 fps

Black/smokeless powder, pyrotechnics

Pushing effect – heave

Tend to deflagrate not detonate

Injuries

Primary – pressure

Secondary – debris

Tertiary – being thrown

Quaternary – condition complication

Ear

Head

Abdominal

Pulmonary (blast lung, butterfly lung)

Airway

Breathing

Circulation

Positive pressure ventilation – use caution

Pneumothorax – decompress

Bombings: Injury Patterns and Care: <https://www.acep.org/blastinjury/>

IED Attack: https://www.dhs.gov/xlibrary/assets/prep_ied_fact_sheet.pdf

First Responder Guide for Improving Survivability in IED and/or Active Shooter Incidents:

<https://www.dhs.gov/sites/default/files/publications/First%20Responder%20Guidance%20June%202015%20FINAL%202.pdf>

IED Safe Standoff Distance Cheat Sheet:

<https://www.hSDL.org/?abstract&did=440775>

Bomb Threat Standoff Distances:

<https://www.dni.gov/nctc/jcat/references.html>