



SAFE-D

Texas State Association of
Fire and Emergency Districts

NFPA 1580
OCCUPATIONAL MEDICAL
TESTING



WHO ARE WE?

JERRY BITTNER



- 40 years in the Fire Service
- Retired Deputy Chief from The Woodlands Fire Dept
- Training / Healthy and Safety over EMS
- Administrative Deputy Chief
- Volunteer with Spring FD in the early 80's
- Started the Fire Service at age 16 with Baltimore County
- Married with 4 children (3 daughters / 2 married to LEO)
 - 1 daughter is a paramedic
 - 1 daughter is a 911 dispatcher

OBJECTIVES



UNDERSTANDING THE **NEED** FOR PHYSICALS IN THE FIRE SERVICE.



UNDERSTANDING THE **DIFFERENT TYPES** OF PHYSICALS THAT ARE AVAILABLE TO FIREFIGHTERS.



UNDERSTANDING THE **COSTS** THAT FIRE DEPARTMENTS MAY EXPECT.



UNDERSTANDING HOW TO **PICK A PROVIDER** BEST SUITED FOR THE DEPARTMENT'S NEEDS.



LEARNING HOW TO **INITIATE** PREVENTATIVE HEALTH MEASURES AS A DEPARTMENT.

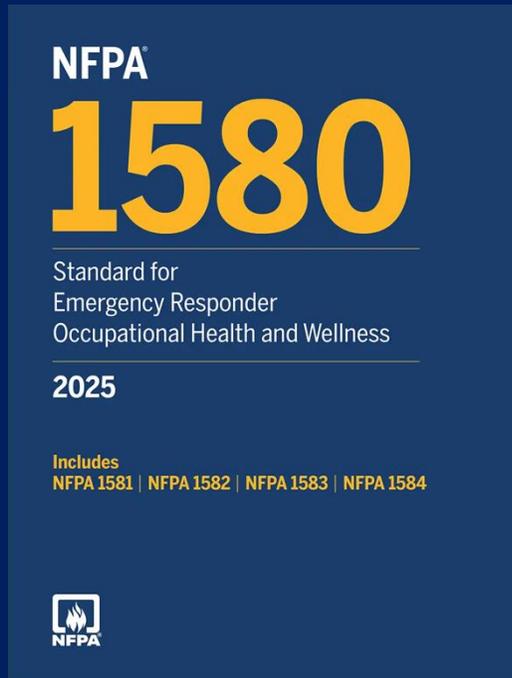
WELLNESS FITNESS INITIATIVE

- Joint Labor Management Wellness Fitness Initiative
 - IAFC
 - IAFF
 - Used 10 City's to develop program in cooperation with IAFC
 - Non-punitive approach

IAFF/ IAFC
Joint Labor/ Management
Wellness Fitness
Initiative



WHAT IS THE NFPA 1580? WHY SHOULD YOU CARE



Standard on Comprehensive Occupational Medical Program for Fire Departments

- 2025 NFPA combined 1580, 1581, 1582, 1583 and 1584 - ***we will be focusing on 1580***
- HB 198 (2025 Legislation): Relating to periodic occupation screening for firefighters
 - AKA Wade Cannon Act

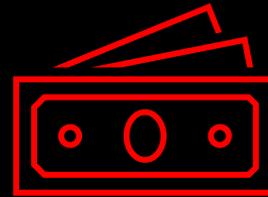
WADE CANNON ACT

- Mandatory Screening for Political Subdivisions
 - Requires political subdivisions to require cancer screenings
 - NO cost to the FF
 - MUST be offered
 - after 5 years of employment, and subsequently once every year following that initial screening
- SCOPE
 - Must be confidential and test for various cancers
 - Chest Xrays (minimally once every 5 years)
 - Political Subdivisions are exempt from this requirement, if they already provide an annual occupational medical examinations that comply with NFPA 1580
- STANDARD
 - TCFP tasks with implementing the minimum standards
 - Effective date June 1, 2026

UNION & MANAGEMENT RELATIONSHIP WITH NFPA 1580



**Labor, HR, Admin staff
involvement**



Budget

All of the department?
Uniform personnel only?

LABOR / UNION AND MANAGEMENT RELATIONSHIP AND THE NFPA 1580 :

- Firefighters wanting the physical exam?
- Making exam Fit for Duty?
- Offering it as Mandatory or Voluntary (Non-Punitive)?
- How to begin.....

INSURANCE BENEFITS

- VFIS offers a reduced rate to the Fire Departments that participate in the NFPA annual physicals.
- To get this reduced rate, the entire Department will need to participate.
- The healthier your department is, equals less use of health insurance which equates to lower health insurance rates.
 - The same can be true for workers comp., but that is difficult to quantify.

WHO ARE WE?

DESI BITTNER



- **13 years as a paid Fire Fighter**
- **30 years as Paramedic**
- **12 years as an ER Nurse**
- **8 years as Nurse Practitioner**
- **6 years as a Provider for over 5000 firefighters and overseeing them while performing the NFPA 1580**

WHY ARE YOU DOING THE NFPA PHYSICALS?

- **Is this a Check box?**
- **Are you vested in your Firefighters?**
- **Are you vested in your department?**
- **Is your department at risk for health issues that will affect them? Their crew? Their dept?**
- **Will spending "X amount of money on the NFPA exam" worth spending on PREVENTION or on mitigation from a catastrophic medical event such as a Heart attack, dialysis, diabetes, stroke...just to name a few?**
- **How will that cost burden the department?....."*an ounce of prevention.....*"**

HEALTH RISKS FOR FIRST RESPONDERS

Heart disease

Diabetes

Sleep disorders

Stress/PTSD

Depression

Back injuries

Thyroid issues

Sexual issues

Kidney Damage

Skin disorders

Metabolic syndrome

Substance abuse

Relationship issues

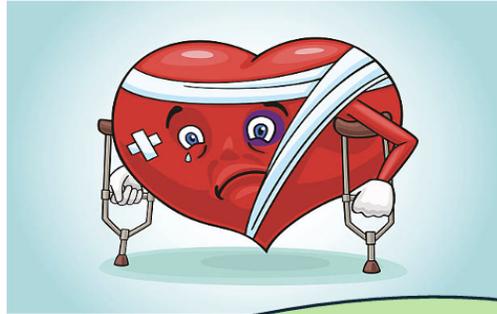
Cancer

Autoimmune Disorders

MET = a way to measure how hard your body is working. The higher the METs the energy you're using

VO₂ max = the maximum amount of oxygen your body can use per minute

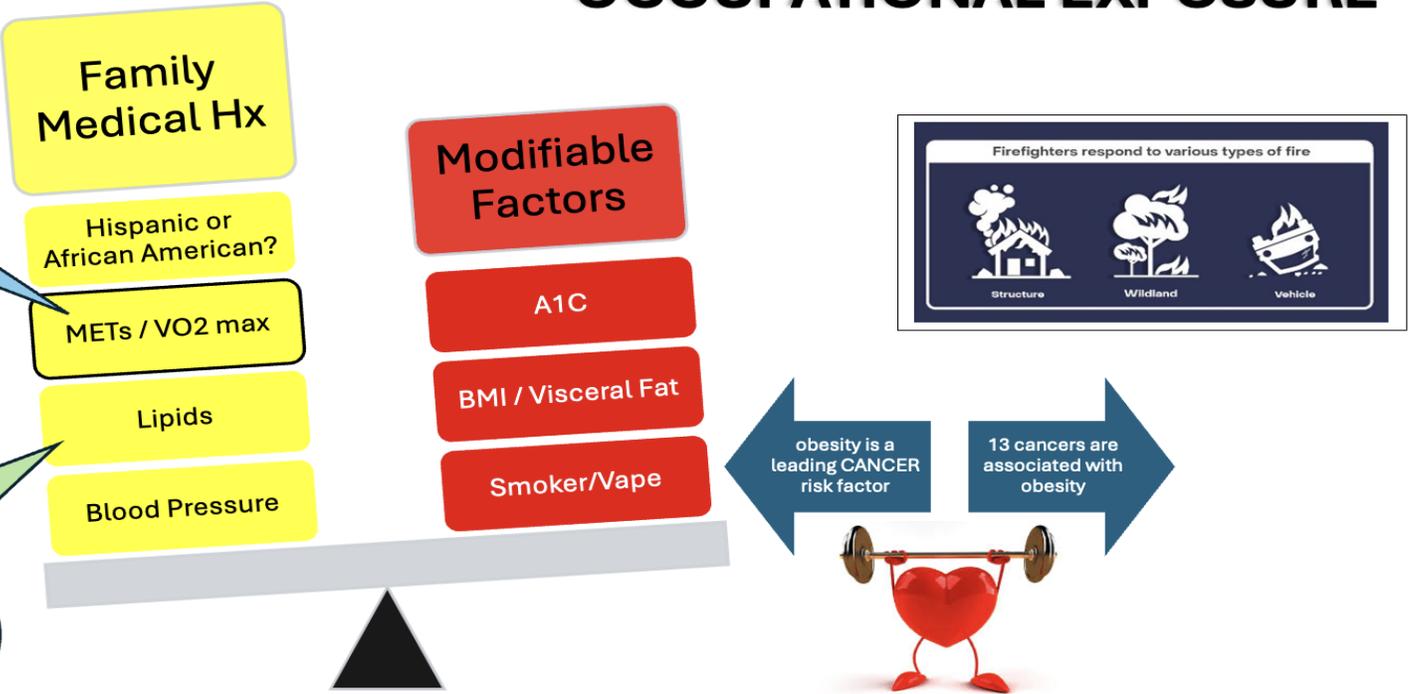
VO₂ max and **METs** are *directly related*, because both measure how much oxygen your body uses during exercise



Triglycerides = Pancreatitis
HDL: Clean-up crew (need these HIGH)
***LDL**: forms plaque → narrows arteries
= INCREASED risk of MI/CVA

RISK FACTORS: Cancer / MI / Stroke

OCCUPATIONAL EXPOSURE



**1ST RESPONSE
CLINIC**

OBESITY INCREASES YOUR RISK OF

13 CANCERS!!!

CANCERVIC.ORG.AU/HEALTHYWEIGHT

1. **Esophageal**
2. **Breast**
3. **Liver**
4. **Gallbladder**
5. **Kidney**
6. **Colon**
7. **Blood**
8. **Uterine**
9. **Ovarian**
10. **Pancreatic**
11. **Gastric**
12. **Thyroid**
13. **Multiple Myeloma (Blood)**

GOLD STANDARDS FOR CANCER SCREENINGS

- **Breast → Mammography (insurance)**
- **Cervical → Pap Test & HPV (insurance)**
- **Colorectal → Colonoscopy (insurance)**
- **Lung → Low Dose CT (avg cost \$250)**
- **Prostate → PSA (lab work)**

MANAGING
OBESITY GREATLY
REDUCES TERMINAL
DISEASE!

**SO, WHAT IS THE COST
FOR THE NFPA 1580
EXAM?**

AVG cost \$600 +/-

NFPA 1580 COMPONENTS

Blood Analysis

Urinalysis

Pulmonary Function Test

Chest X-Ray (yearly?)

Treadmill Stress Test

VO2 Max Assessment

Vision Testing

Mental Health Screening

Audiometric Exam

Ultrasound Screening

Cancer Screening***

BLOOD & URINE ANALYSIS

1. **CBC**
2. **CMP**
3. **A₁C**
4. **Lipid**
5. **TSH**
6. **PSA**
7. **Testosterone**

* **URINALYSIS**

LUNG HEALTH

1. Pulmonary Function Test

2. Chest X-Ray

- (B-Read X-Rays for Heavy Metals/lithium)

3. Low Dose Lung CT

HEART HEALTH - STRESS TEST

- **New Hire? -----> HAS TO REACH REQUIRED METs!!!! (Why should you care???)**
 - **What is a MET? "Metabolic Equivalent of Task," which is a unit used to measure the intensity of a physical activity by comparing the amount of *energy used during an activity to the energy used while sitting at rest.***
 - **One MET is equal to the amount of oxygen consumed while sitting at rest.**
 - **Walking at a leisurely pace might have a MET value of around 3, while running at a fast pace could be considered 8-10 METs.**
- **Annual Physical? Why would you want a FF that is UNABLE to reach required METs?**
- **MAKE sure that the New Hire Physical includes a stress to calculate a MET and NOT just a baseline EKG!**
- **VO2 Max = the maximum amount of oxygen that an individual will use during intense activity.**
- **A higher VO2 max means your heart and lungs are more effective at supplying oxygen to your muscles -->**
- **Your muscles are more efficient at using oxygen from your blood = 2 air bottles before a break is needed.**

WHAT IS A MET (metabolic equivalent)? A measurement to see the amount of energy used to do a job.

1 MET is the energy used while sitting still or doing nothing

METs help give an idea of how intense an activity is based on how much energy is needed vs. just sitting around

35 th % - MINIMUM standards (No Co-morbidities)		
AGE	MALE	FEMALE
20 - 29	12.4	9.6
30 - 39	11	7.8
40 - 49	9.9	6.9
50 - 59	8.4	6.1
60 -69	7.3	5.3

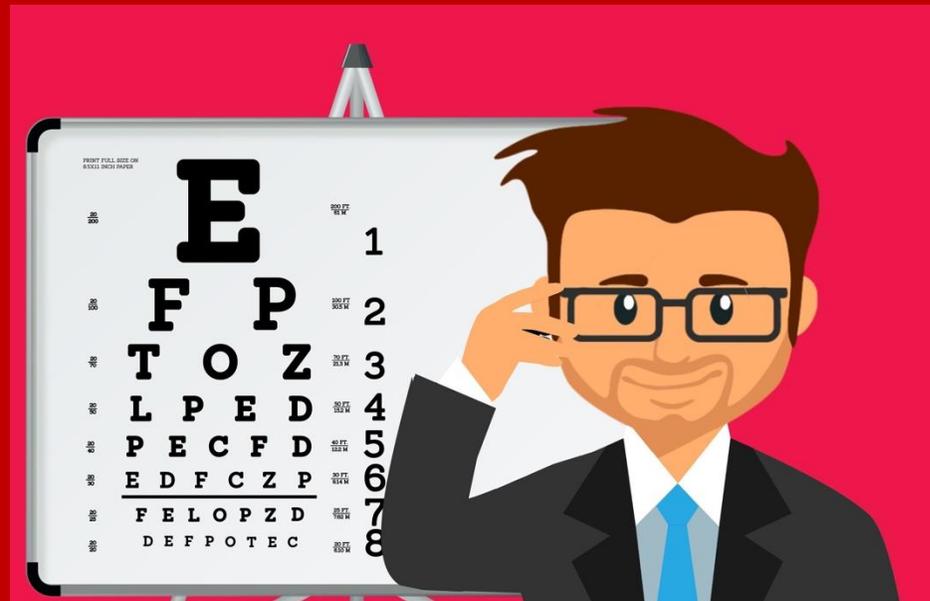
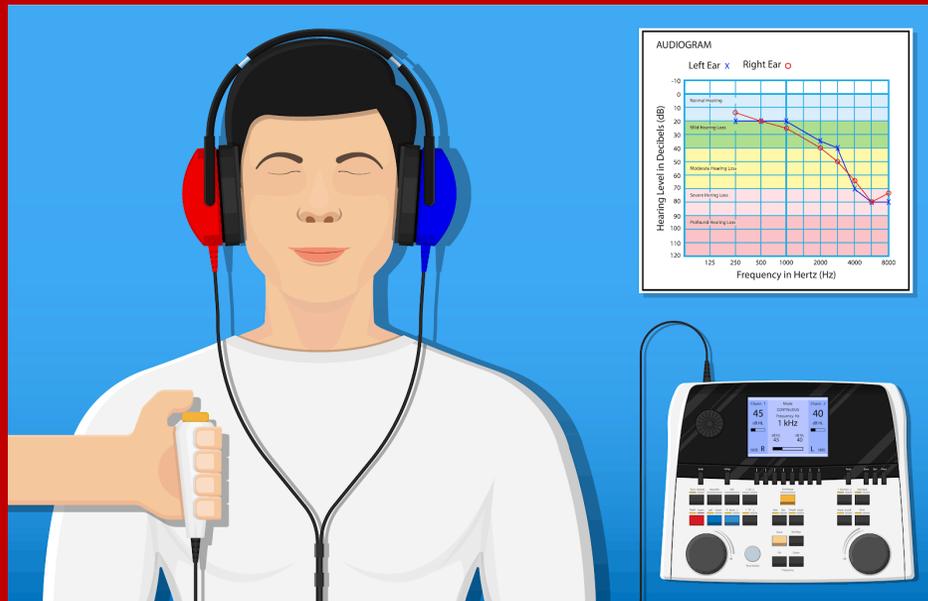
- At levels at or below 35% (VO₂=28 ml/kg-1 min-1), a prescribed aerobic fitness program shall be required, and the Authority Having Jurisdiction (AHJ) shall be advised to consider restriction from essential job tasks 1, 2, 4, 5, 6, 7, 8, 9, and 13
- While there is no “fail” – Firefighters who do not achieve the 35% of METS, or higher, we do recommend retesting at the station with the peer fitness trainer 4-6 months after initial test.

50 th % - OPTIMAL standards (Multiple Co-Morbs - <u>have to</u> work harder to be FFD)		
AGE	MALE	FEMALE
20 - 29	13.7	10.7
30 - 39	12.1	8.6
40 - 49	10.8	7.6
50 - 59	9.3	6.7
60 - 69	8.1	5.7

MENTAL HEALTH

- **PHQ-9 = Depression**
- **GAD = Anxiety**

HEARING / VISION



ULTRASOUND SCREEN

(Cancer Screening)

1. **THYROID**
2. **CAROTIDS**
3. **ABDOMINAL ORGANS**
4. **PELVIC ORGANS**
5. **REPRODUCTIVE ORGANS**
6. **HEART**
7. **ECHO?**

WHY ALL THE TESTING?

- To have a **SUMMARY** of the health of the firefighter!
- *Have a plan to improve their health!*
- Yearly Evaluation for improvement
- Do they meet the 15 Essential Job Functions of their job???
- Are they "Fit For Duty?" (*just what does that mean???*)

BENEFITS OF FIRST RESPONDER HEALTH & WELLNESS

Greater Strength
and Stamina

Weight Reduction
And Maintenance

Lower Cholesterol

Lower Blood
Pressure

Decreased risk of
death and injury

Improved job
performance

Reduced ANXIETY,
STRESS, TENSION
and DERESSION

Increased energy,
general vitality and
mental sharpness

Enhanced self-
esteem and image

Improved sleep
patterns

Enhanced capacity
to recover from
strenuous and
exhaustive work

Homeostasis

Improved mobility,
balance and
coordination

Improved family
life

Reduction of
\$\$\$\$\$\$\$\$

FIT FOR DUTY VS. WELLNESS PHYSICALS

Fit For Duty (FFD)



Medically Qualified



Unable to meet 1 or more of the 15 Essential Functions due to Medical Reasons

Wellness Physicals



Voluntary



Non-punitive



More Flexibility

NFPA 15 ESSENTIAL JOB TASKS

The fire department shall evaluate the 15 essential job tasks against the types and levels of emergency services provided to the local community by the fire department, the types of structures and occupancies in the community, and the configuration of the fire department to determine which tasks apply to their department members and candidates

WHAT NOW?

Where do you go from here?



How do you handle RESTRICTED individuals?



How do you improve the overall health of your department?

WHO ARE WE?

SYDNEY COUNTS



- Wellness and Fitness Educator
- Masters of Science in Sport and Human Performance
- Former Traveling Exercise Physiologist For Fire Departments
- Background in Nutrition and Fitness

STAGES OF WELLNESS

Disease

- Multiple medications
- Poor quality of life
- Potential is limited
- Limited mobility and body function

Poor Health

- Symptoms
- Drug therapy
- Surgery
- Losing normal function

Neutral

- No symptoms
- Inconsistent nutrition and exercise
- Sporadic habits
- Health is not a priority

Good Health

- Regular exercise
- Quality nutrition
- Wellness education
- Minimal interferences

Optimum

- 100% function
- Continuous development
- Active participation
- Wellness lifestyle

WORKING TOWARDS OPTIMAL HEALTH ON SHIFT



MEAL PLANNING AND
PREPPING FOR THE
ENTIRE SHIFT



ACCOUNTABILITY AS
A SHIFT

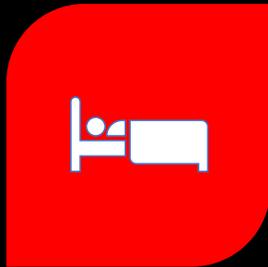


PRIORITIZE
MOVEMENT DURING
DOWN TIME



MOBILITY AND
FLEXIBILITY WORK
EVERY MORNING

WORKING TOWARDS OPTIMAL HEALTH AT HOME



SLEEP, SLEEP, SLEEP!!!



KEEP YOUR NUTRITION
SHARP, LIMIT THE
INDULGENCES



FIND EXERCISE YOU ENJOY



FOLLOW UP ANNUALLY
WITH YOUR PCP OR HAVE A
NFPA PHYSICAL YEARLY.