

# SAFESTART HUMAN FACTORS



## CONFERENCE

# 2022

Orlando, FL

November 8 & 9

## HOW A FALL TOOK SAFETY TO NEW HEIGHTS

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## SESSION DESCRIPTION

Good safety managers know how important it is to walk the talk. Being a living embodiment of safety training every day creates the illusion that safety doesn't require much thought outside of work. Accidents can happen to anyone, at any time (even safety professionals) but they're 100 percent preventable. This session recounts a safety manager's 15-foot fall from a tree stand. Knowing how to self-trigger on certain states of mind could have helped prevent this accident and they can vastly improve off-the-job safety for everyone.

## INTRODUCTION / BACKGROUND

- Bachelor's degree in Kinesiology Education
- 7 years as high school Teacher & Football/Baseball Coach
- 15 years of experience as a safety professional
- SafeStart Champion
- Implemented SafeStart in multiple locations in Tenaris
- Gulf of Mexico marine transportation
  - Gulf Resource Management – Safety/Security Manager
- Oilfield services
  - Baker Hughes – HSE Leader
- Pipe manufacturing
  - Tenaris – HSE Sr. Manager (multiple locations)



GULF RESOURCE  
**MANAGEMENT**  
A MARINE TRANSPORTATION COMPANY



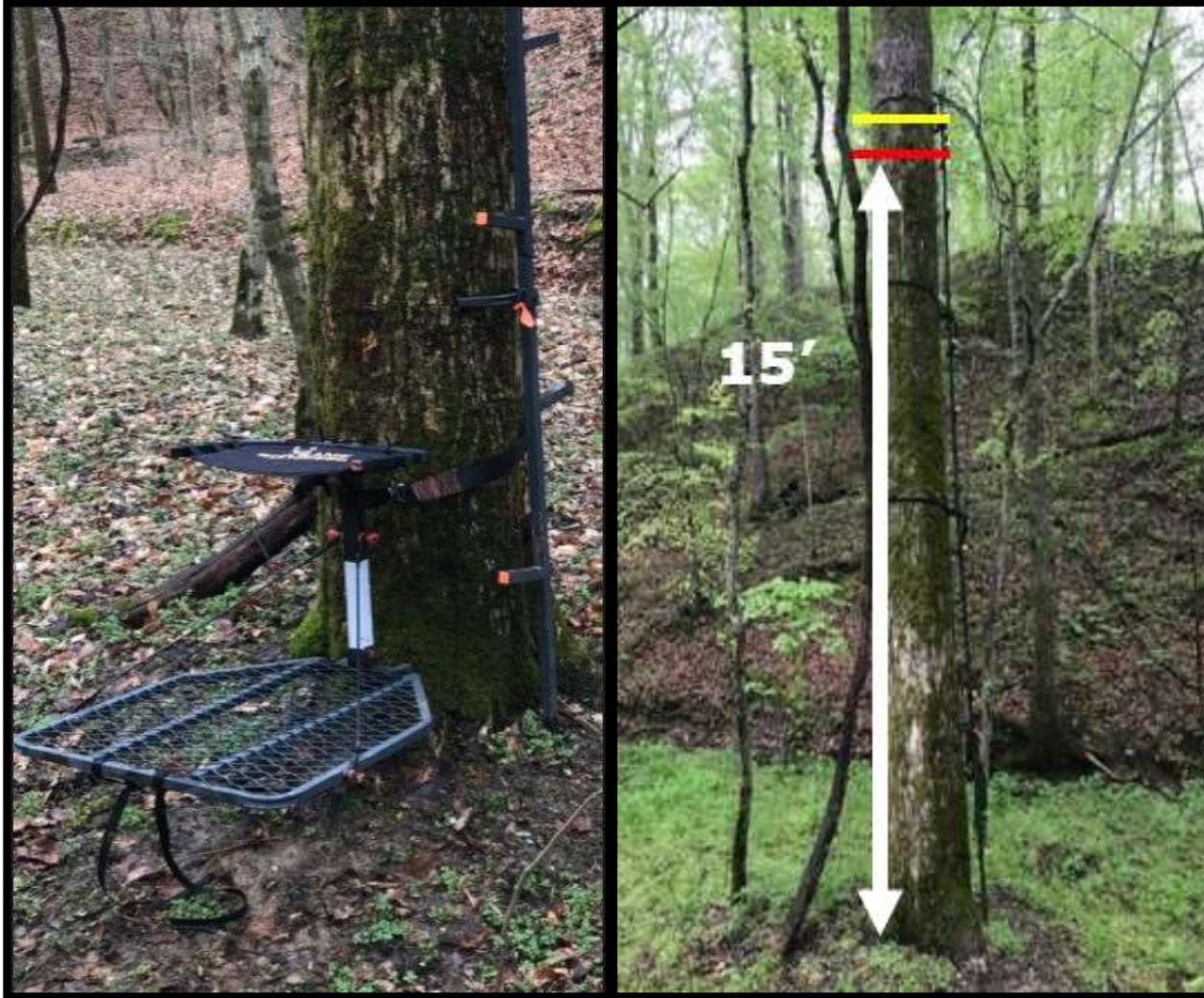
# ROPE SWING

Obvious safety hazard

December 26, 2020



## CONDITION – TREE STAND & LADDER



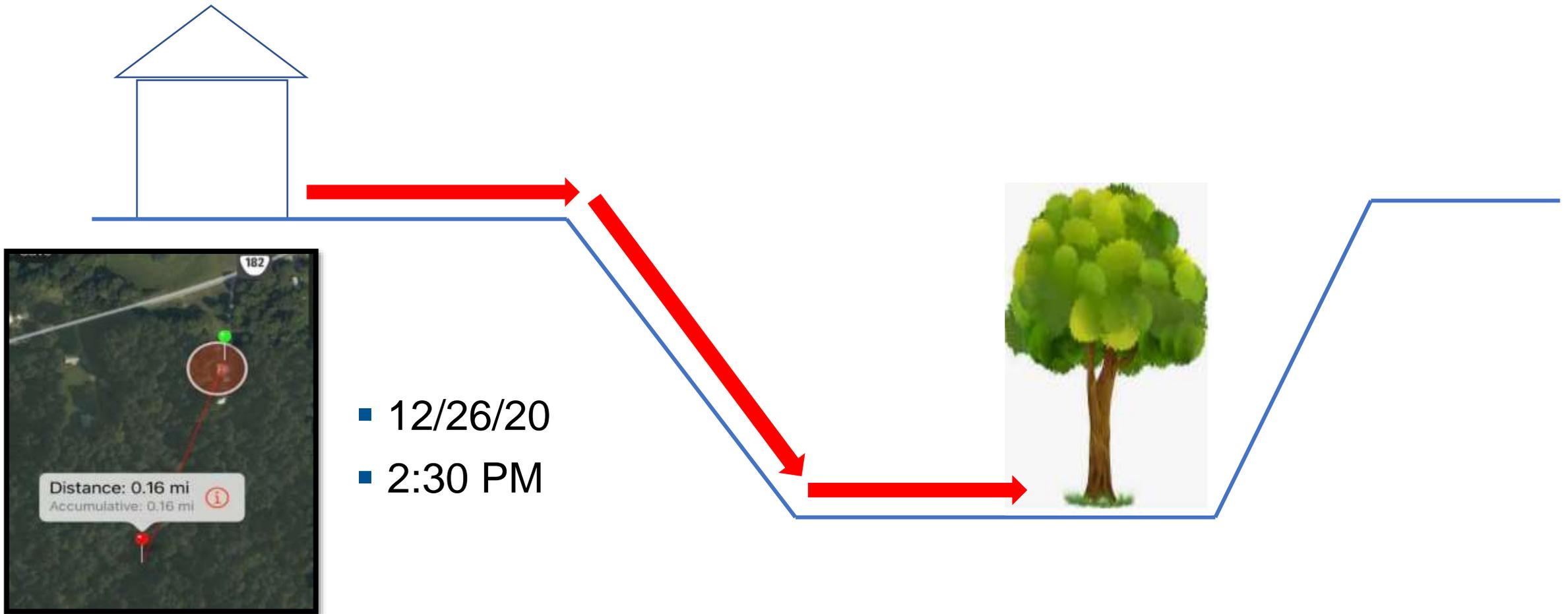
The stand was assembled in factory condition on a sturdy tree in nearby woods.

The lower foot platform of the stand was 15' off the ground and the stand was strapped to the tree.

The ladder was fastened to the tree independent from the stand and stood 16' tall.

The stand and ladder were attached to the tree 3 years prior and was not used for hunting.

# TRAVELED TO TREE ON ATV (ALEX & I)



# PROBLEM

I climbed ladder to remove strap and observed there was tree growth around the strap (3 years). This made it difficult to remove the strap without additional tools.

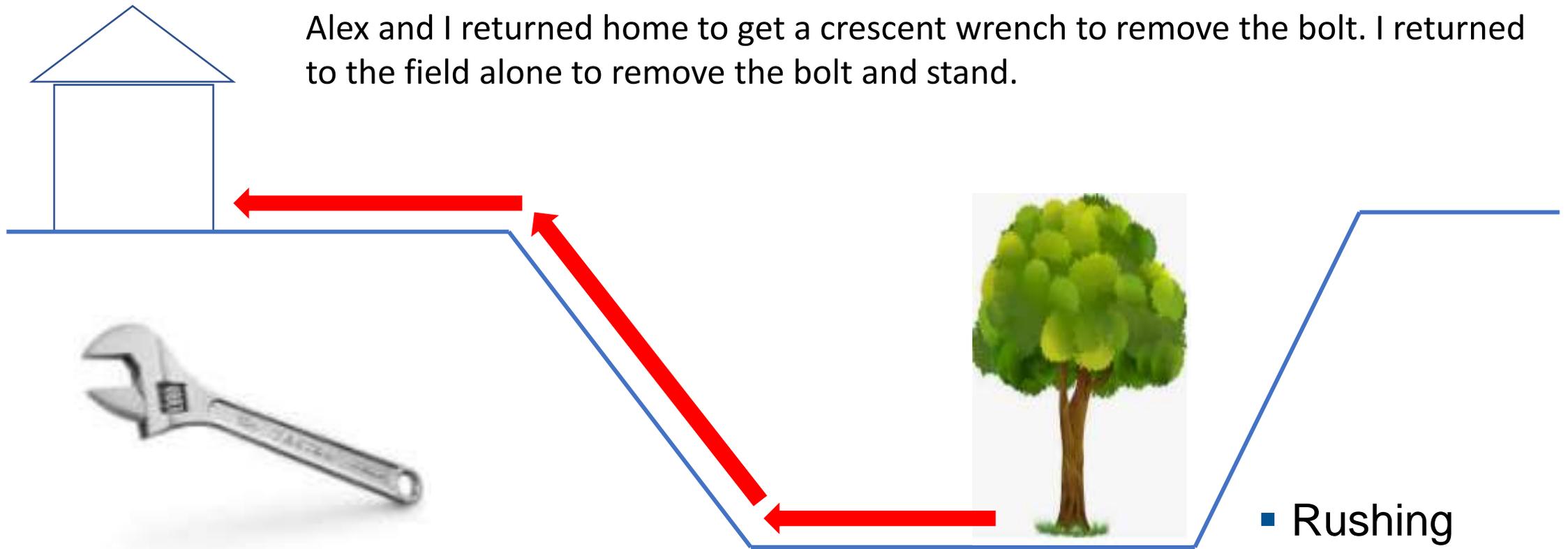
There is one bolt holding the strap to the spine of the stand. This bolt and nut can be removed to free the spine from the strap, thus allowing the stand to become unattached to the tree and to fall to the ground. This would require a crescent wrench to remove the nut from the bolt.



- Rushing
- Frustration
- Complacency

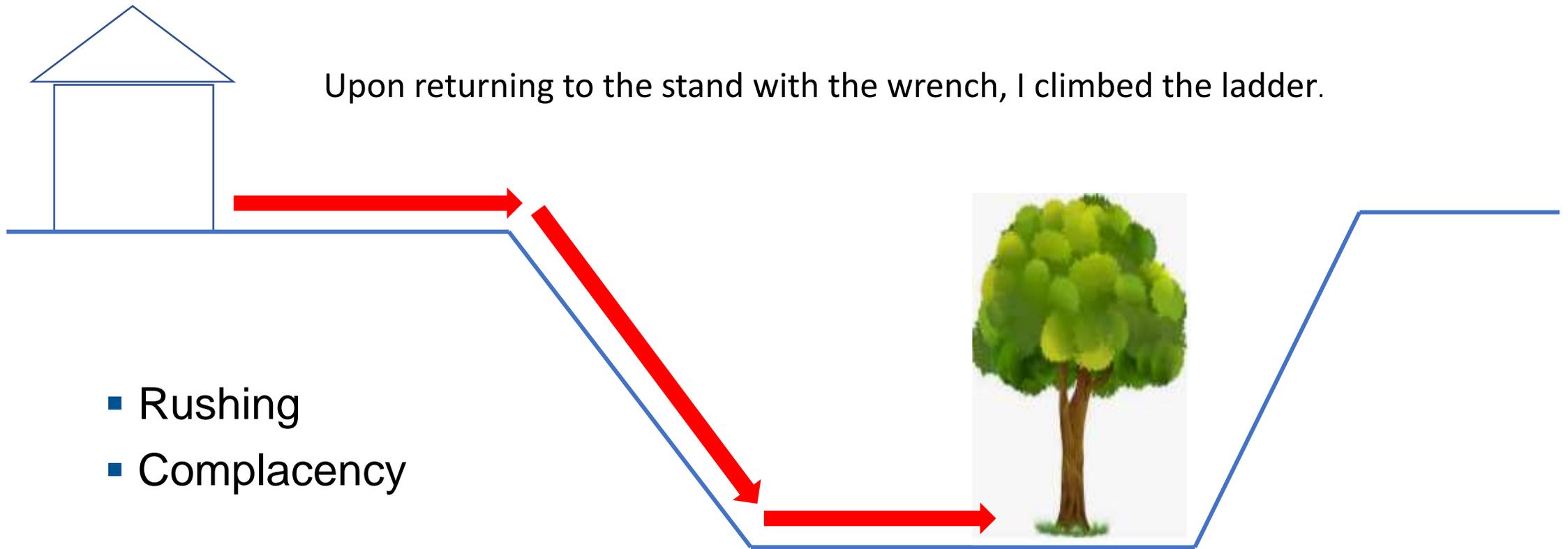
# RETURNED HOME (ALEX & I)

Alex and I returned home to get a crescent wrench to remove the bolt. I returned to the field alone to remove the bolt and stand.



- Rushing
- Complacency

## TRAVELED BACK TO TREE (ALONE)



- Rushing
- Complacency

## ADDITIONAL PROBLEM

While standing on the ladder with both feet and holding with right hand, I used my left hand to turn the nut on the bolt. This caused the nut and bolt to spin simultaneously, because there was a lock nut in place on the bolt, therefore not freeing the nut from the bolt.

A backup tool was needed on the bolt end to spin the nut free.



- Rushing
- Frustration
- Complacency

# ERROR

I did not have an additional tool available and put slight pressure with my left foot on the foot platform of the stand.

This pressure put the bolt in a fixed position and the nut turned slowly with the crescent wrench.

There was approximately a half inch of the bolt sticking out of the nut to be removed and I began to slowly unscrew the nut.



- Rushing
- Frustration
- Complacency
  
- Loss of balance, traction and grip

# FALL

The next thing I knew, I was on the ground.



I had fallen to the left of the tree, approximately 15-16 feet down, and landed on the ground. I was in a seated position with my legs outstretched facing the tree.

The stand fell next to me on the ground to my left.

No contact was made between me and the stand during the fall.

The ladder was independent of the stand and remained secured to the tree.

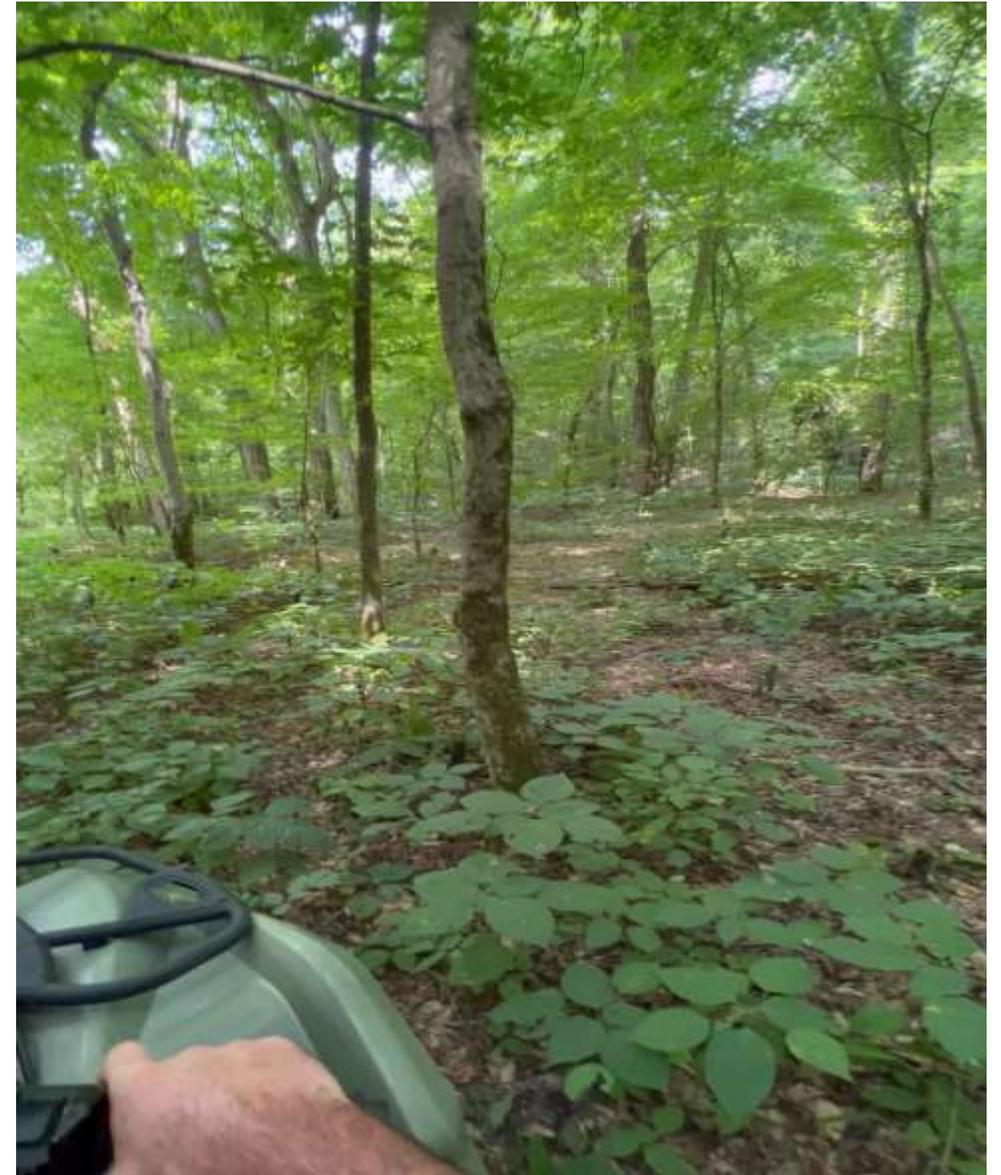
Upon contact with ground, my chin hit my chest and a “crunch” was felt in my lower back.

I used the nearby 4-wheeler to stand on my feet and found that I was able to walk.

## RETURNED HOME (ALONE)

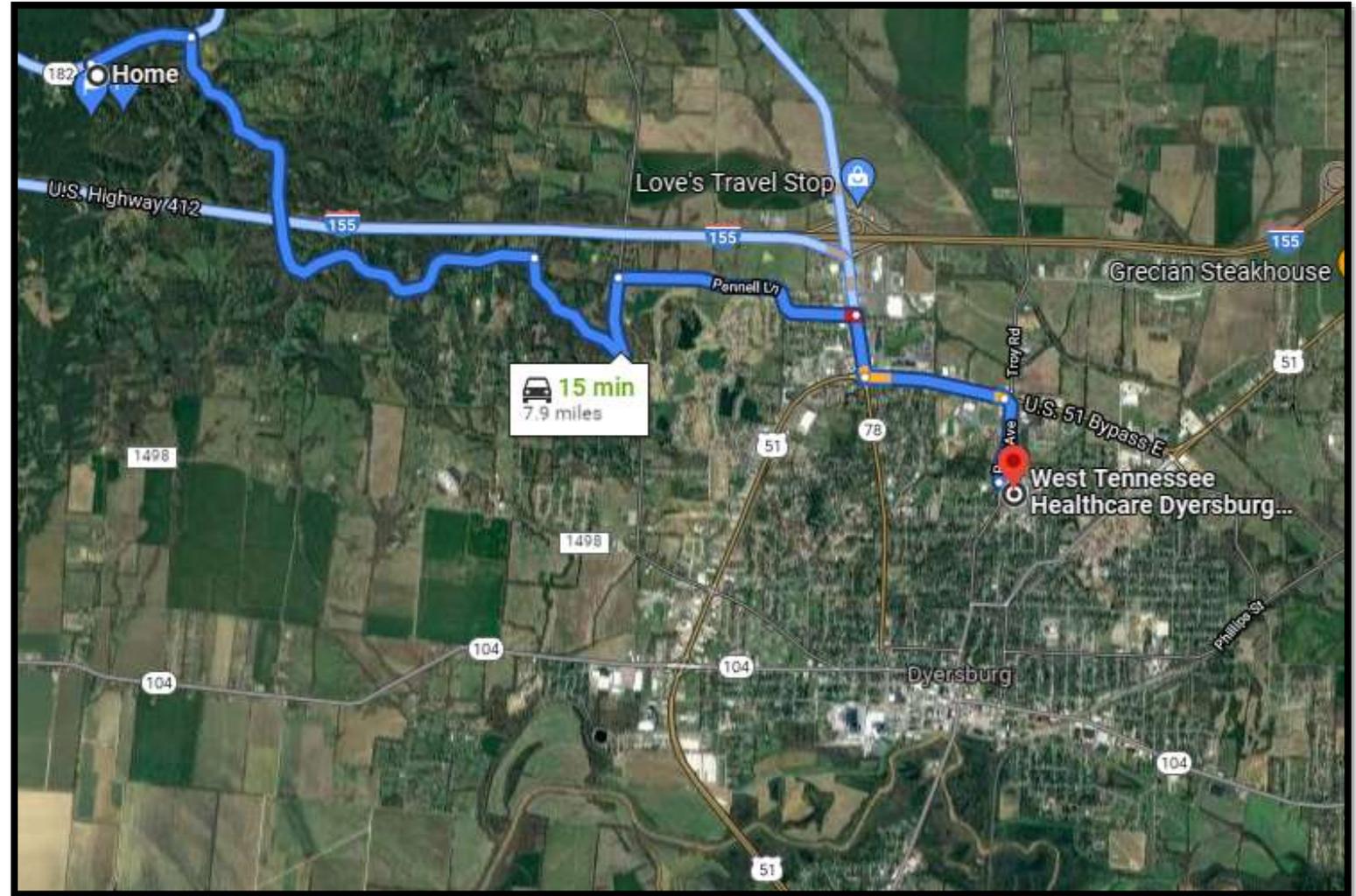
After discovering I was not paralyzed but in considerable pain, I used my 4-wheeler to ride home in the standing position.

Adrenaline, panic and fear had taken over.

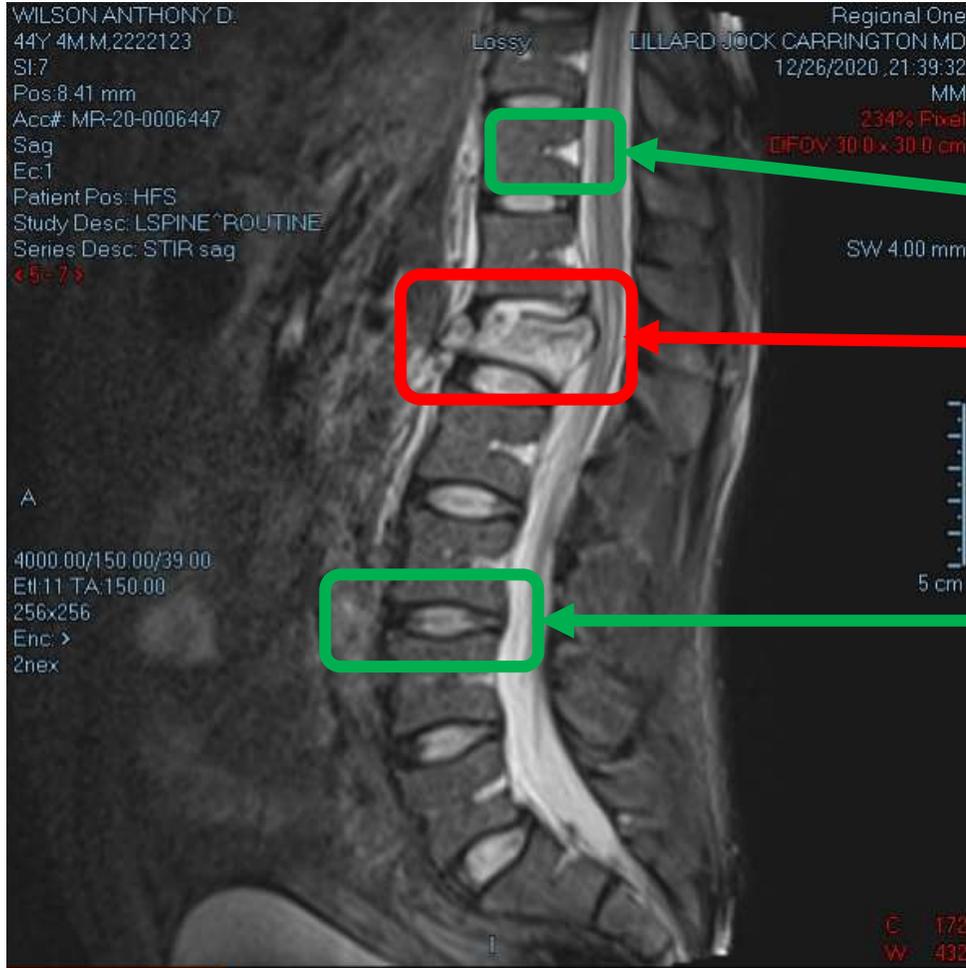


# EMERGENCY ROOM (PASSENGER SEAT OF DODGE RAM)

- Dyersburg, TN emergency room
- Identified Lumbar 1 vertebrae burst fracture
- Stabilized and prepared for air transport to Memphis



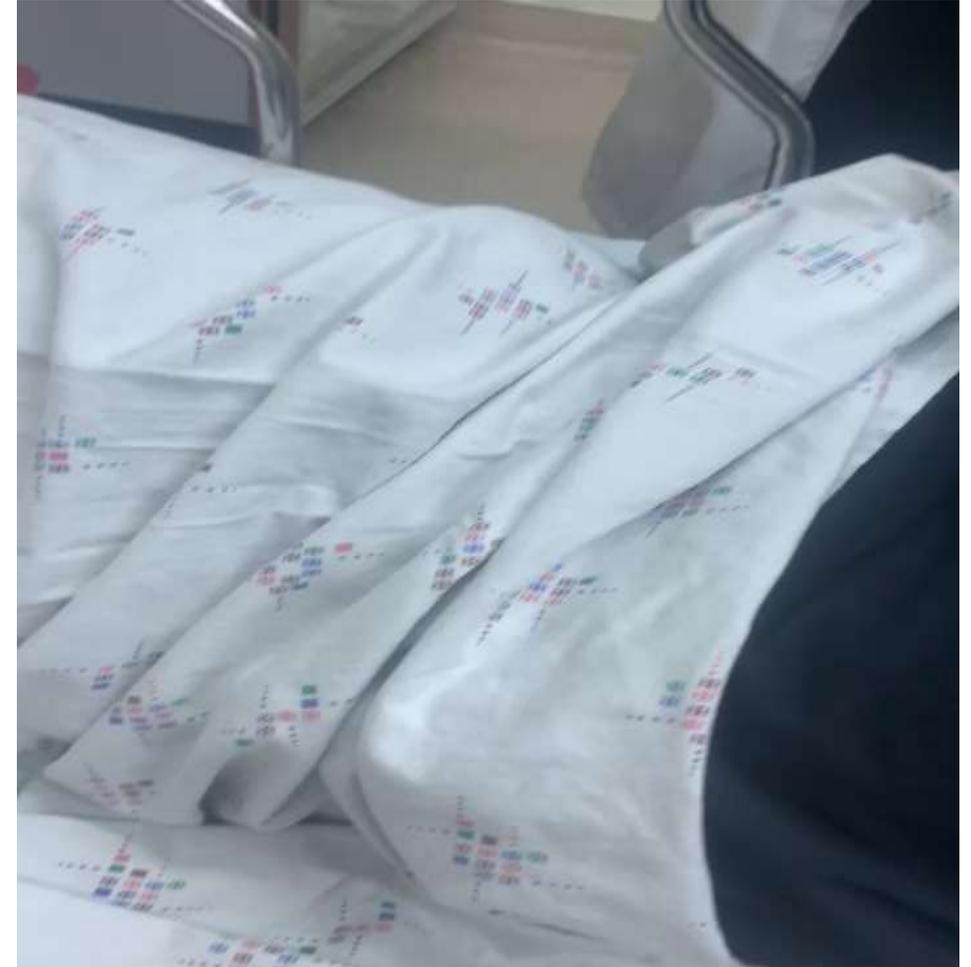
# INITIAL NEWS OF INJURY (12/26/20)



Normal Vertebrae

Ruptured L1  
Vertebrae

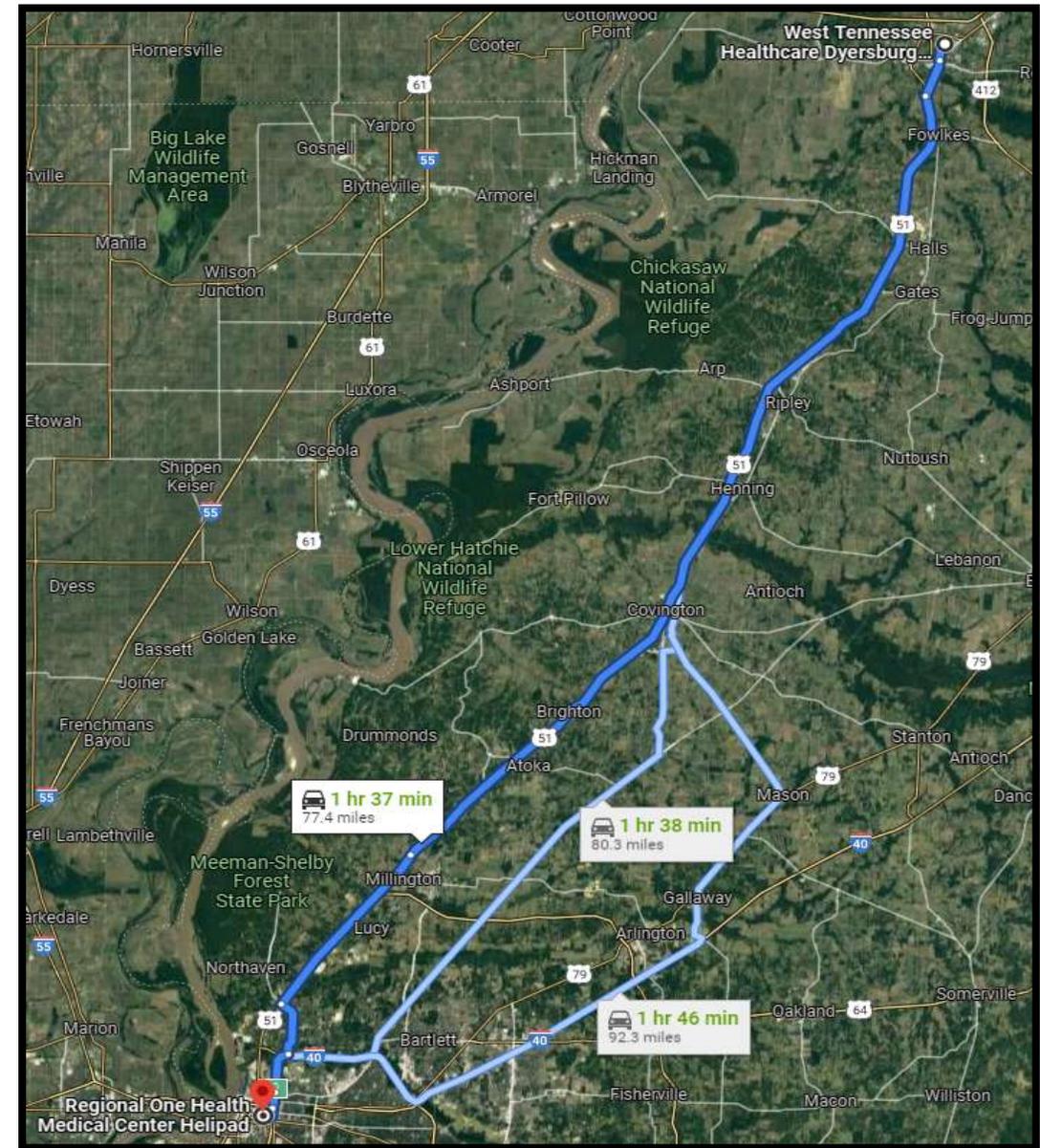
Discs



# TRANSPORT (HELICOPTER)

12/26/20

- Air lifted to emergency room at Regional 1 Medical Center in Memphis, TN
- Ketamine was needed during transport
- Stabilized with back brace and transferred to step-down trauma unit
- Prepared for surgery



# SURGERIES

12/28/20 – Surgery 1:

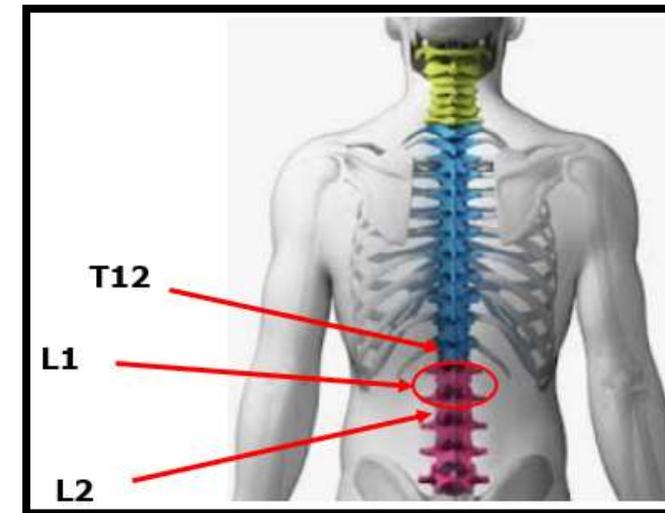
- Remove left rib to access the area and gather bones from the fracture
- Insert cage into L1 location to fill with vertebrae bones and a portion of left rib
- Complication – Left lung collapsed and would now require a chest tube while in the hospital



12/30/20 – Surgery 2:

- Access the injured area through my back to install hardware that attaches the T-12 to the L-2

\*\*\*Only one visitor allowed on surgery days due to COVID\*\*\*



# CONSEQUENCES (RECOVERY IN HOSPITAL)

12/31/20 – Surgical Recovery:

- Physical therapy
- Multiple scans
- Strengthening of lung with chest tube

1/4/21 – Release from trauma unit and hospital

- Vehicle transport to Dyersburg, TN
- Began home recovery

9 days spent in a step-down trauma unit with car crash and gunshot victims (significant injuries).

\*\*\*Only one visitor allowed on surgery days due to COVID\*\*\*



# HOSPITAL EXPERIENCE

- Very lonely due to COVID (there were no exceptions granted).
- 14 beds in the trauma unit were all full.
- I heard moaning and screaming all through each night from nearby patients.
- The helipad was outside my window, and it constantly flew in and out the entire time. Injuries were constantly occurring.
- A hospital never sleeps.
- This was my first time in the hospital, and I was not a happy patient.

According to the hospital staff, the most frequent injuries involve:

- Motorcycles, ATV's/UTV's, Hunting

## CONSEQUENCES (MENTAL)

- I'm a safety professional, why me?
- Now my wife must handle the whole workload of the family.
- Does Alex feel guilty for not going with me?
- Is my job going to be there when I return?
- Did I lose the respect of the workers in the plant?
- Am I ever going to heal from this?
- Will additional surgeries be required in the future?

# CONSEQUENCES (RECOVERY PAIN)

Recovery – 5 months off work

- 1st month - in bed only
- Extreme nerve pain (medication not provided when released from hospital)
- Narcotic pain relief (2-week supply prescribed with no refills)
- Refills available only through pain management program (opted out)
- Physical therapy (2x week for 10 weeks)
- Recovery from prolonged catheter in hospital



# CONSEQUENCES (CHRONIC PAIN)

## Back Pain:

- Lasted 1 year
- Lower back soreness
- Could not stand or sit for prolonged periods
- Difficulty bending to the floor
- Hunched over and painful to stretch tall

## Nerve Pain:

- 50% of my pain and discomfort
- Overlooked by the medical community (my opinion)
- Numbness and tingling subsided moderately over a year
- Permanent nerve damage occurred



## CONSEQUENCES (FAMILY / LIFE BALANCE)

Family/Life Balance:

- Dad is home but unable to participate
- Daily responsibility was transferred to spouse
- Potential life-long inability to perform physical activities (sports & hobbies)
  - Golf
  - Hunting
  - Fishing
  - Softball
  - Power sports
  - Homestead
  - Roller Coasters

## CONSEQUENCES (FINANCIAL)

Financial:

- Reached out of pocket for 2020 & 2021
- Total Cost - \$396,104
- Hospital cost - \$263,000
- Airlift cost - \$59,000
  
- Physicians
- Multiple hospitals
- Emergency transportation
- Anesthesia
- Walker
- Back braces
- Physical therapy
- Medications
- Follow-up visits
- X-rays and scans



# RECOVERY

At one year, scans showed that I was fully fused and had no restrictions.

Permanent nerve damage is managed with no medication (learned to live with it).

All previous activities were resumed, except for climbing trees.

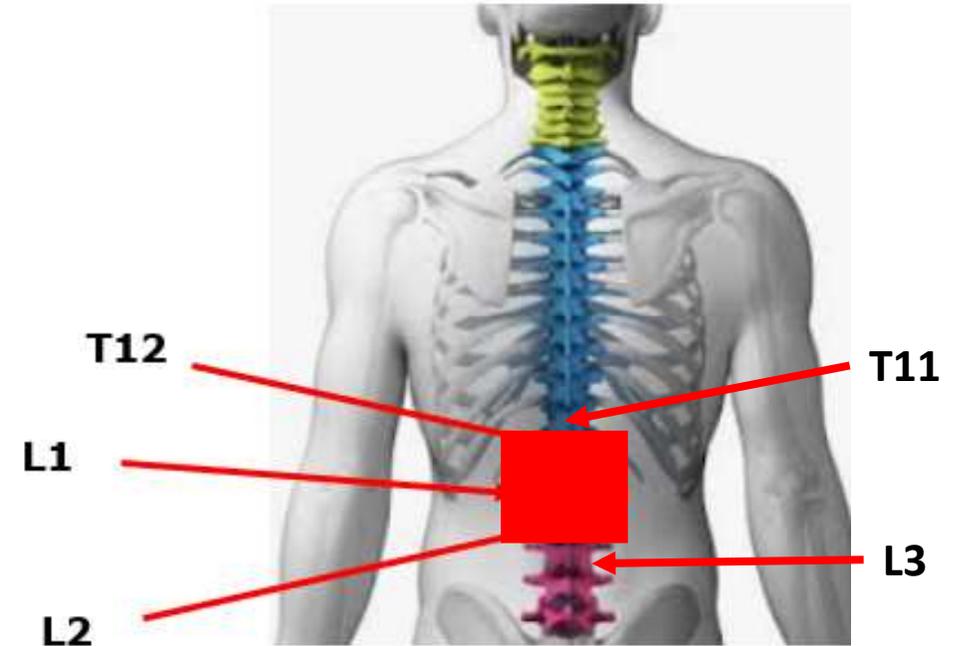
Joined church softball team (can't bend like I used to).

Play golf as often as possible.

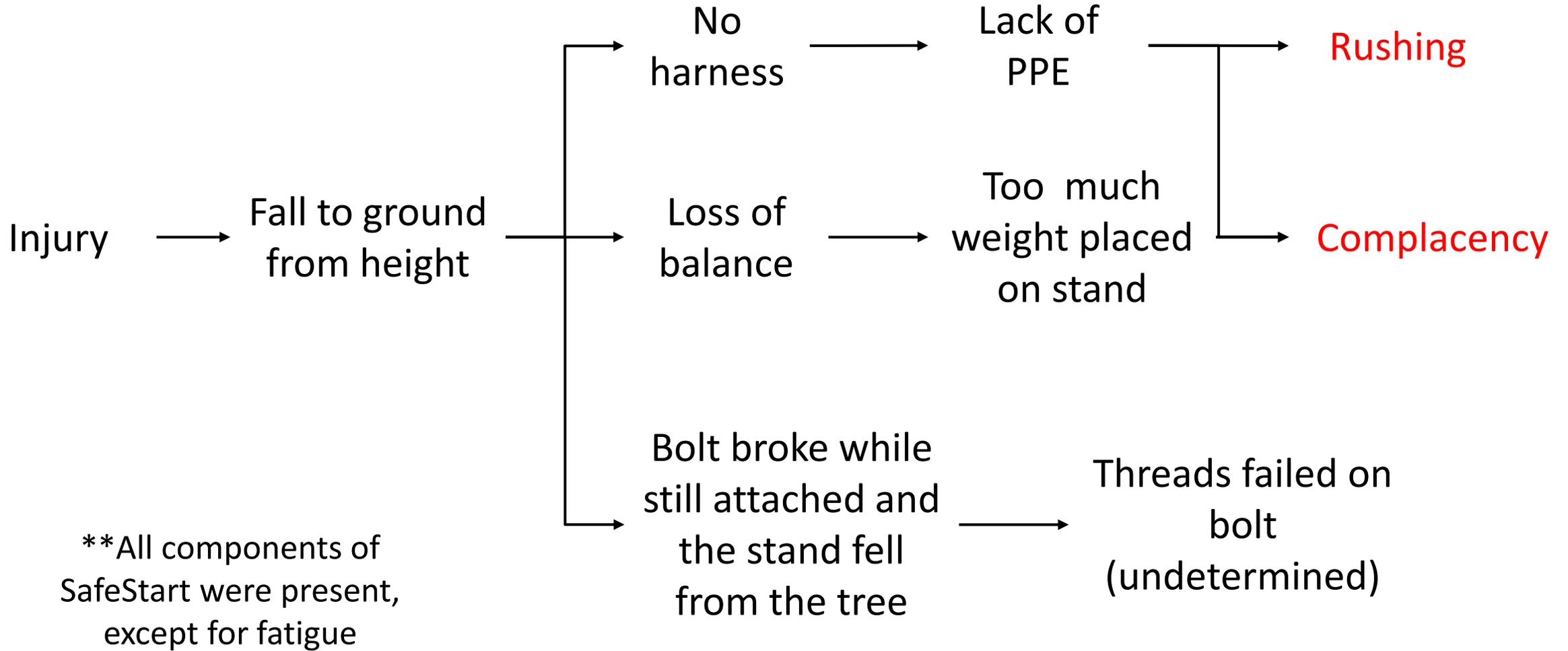


## AFTERMATH

- 3 vertebrae are permanently fused
- Zero flexibility
- Prolonged extra stress on T11 & L3
- May require multiple surgeries in the future
- Live a full and active life until that happens



# CAUSE



# HOW IT COULD HAVE BEEN WORSE

Even with a significant injury and lifelong damage, I know that I was extremely lucky.

I could have been:

- Dead – No more Daddy, Husband, Son, Friend, etc.
- Paralyzed – Unable to walk and/or reduced motor function
- More severely injured – Not able to drive myself out of the woods
- In a coma – Significant lifelong brain injury
- Without proper care and nearby access to skilled spinal surgeons



## LESSONS LEARNED

- Don't climb trees
- Share my story
- Slow down and don't take shortcuts
- Utilizing SafeStart would have prevented this injury
- The human body is amazing and able to heal
- I am not invincible
- I am not as young as I used to be
- It can definitely happen to me

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# THANK YOU FOR ATTENDING!