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Ray Lewis (Baltimore Ravens - Retired) was one of the NFL's all-time greatest linebackers. Ray's success was due to his ability to size-up his rivals, adapt his position and overcome his enemies' strengths, and prey on their weaknesses. The outcome of the primary search is influenced by the ability to size-up the enemy. Capitalize on your known strengths, your enemies' weaknesses and adapt your body positioning.

Our civilians' survivability is dependent on time, in which time is determined by us. To be both efficient and effective, the search must be hasty yet thorough. Exploit the known characteristics of fire behavior, and occupy the space below the neutral plane to size-up LIFE, Fire and Layout. Your body position should place the ears where sound is farthest traveled, the eyes where it is most visible and place the hands where the victims are.

"Inches of visibility are worth miles of work" - Brian Olson.

When searching in most residential occupancies, a firefighter should not need continuous contact with another firefighter, wall or search line to stay oriented. Knowledge of building construction and floor layouts along with practical training, can prepare a firefighter to stay oriented, efficient and off the wall in adverse conditions.

Body Positioning Matters

The search position height is dictated by heat, but the position is chosen. The position is chosen for its ability to amplify sound, maximize visibility and remain efficient.

The denser the smoke the eyes and ears are occupying, the more suppressed the senses become. This decreases the ability to locate an egress, the crew's ability to communicate and the ability to see, locate or hear victims and downed firefighters.

Down On All Fours (Crawling)

This technique has traditionally been the “norm” and what the textbooks and our recruit academies taught and engrained in us. So why did they teach us this? Because, it’s an efficient way to stay low and move throughout a low visibility, high heat structure. It’s just not an efficient and effective way to search.

The number one priority on the fireground is LIFE, it always has been and always will be. Even though crawling is an efficient way to stay low and move, this position forces the eyes down and is counterproductive to the assignment. You are unable to monitor conditions above, causing the searcher stop and sit upright to visualize overhead. To make the primary search a success, we need to move with haste and be thorough.



Crawling is dependent on all four appendages to continually hold up and balance the body. When one is crawling and lifts a hand to sweep, the balance must be adjusted or the body will tend to follow. Opt to not sweep, and the ground covered in one pass becomes inefficient. If you come upon below-grade stairs or a compromised floor while on all fours, the center of gravity can lead you into the hazard. Crawling tends to open up the palms for burns and trauma, which we need for ourselves and THEM. If crawling is the adopted body search technique for you or your department, at the least, only crawl when the conditions dictate.

Upright On Two Feet (Walking)

Every firefighter spends more time on their feet in their life than any other type of search position. When the conditions allow, this can be a very quick, sturdy and effective position to use. Ever heard, “If you can see your feet, then walk”. It isn’t my feet that I am worried about, it’s what is beneath them that matters.

The distance of vision in a standing position, is greatest when looking straight down towards your feet, and decreases as the eyesight rises. Being able to see 5 feet down to your boots, does not equate to the same visibility as 5 feet in front of you. In low to zero visibility, firefighters that are standing tend to be slow, use their hands to navigate walls and furniture and concentrate on not tripping on objects.



Walking can be the favorable position when searching in high visibility. This technique with these conditions allow for a tool to be easily carried. Be heads up when operating above the fire or unaware of its location.



The Tripod-Position

A firefighter that trains with this technique can be efficient, and search a structure with nearly the same speed that one can on their feet.

The tripod position keeps the center of gravity low and to the rear, which creates a stable and balanced stance. The position leads with a foot and a tool (typically a halligan) which increases the stability and situational awareness. The foot and halligan head (adz & pike) can give warning and increase time to react, to compromised floors and step downs such as below grade stairs.

The tripod position can cover more square footage per pass and increases efficiency. The position allows the use of both hands and ability to move at angles. If the conditions warrant, transitioning from the tripod to a body sweep can be fluid and maintains an efficient search. Visibility is maximized for the environment by getting low and naturally keeping the eyes up.



This technique keeps eyes up, to scan for victims, egress and monitor the conditions.

Body Length Sweep/Search

Can be used to sweep the entry and egress and in low to zero visibility, high heat searches. This will increase the probability of finding the 42% of victims that collapsed, during re-entry for fire control, returned for a rescue attempt or attempting egress (NFIRS Data - Fatalities Only). www.FirefighterRescueSurvey.com reports that 12% of all structural fire victims are within 6 feet of a door.

Upon forcing access or egress, complete the assignment and perform a full body length sweep and Size-Up; LIFE, FIRE, LAYOUT.

Observe the floor plan of your own home and all the homes you have been through. What are the chances of being able to perform a full length body and arm sweep in the bedroom, bathroom, kitchen or laundry room, and not hit anything? The probability is low, within that space is a bed, night stand, dresser drawers, a clothing pile, tables, chairs, couches, another wall and most likely more.

If rooms are typically crowded with furniture and debris and can be reached with a body length search, why sweep with a tool that has no feeling? What if there is something soft or hard struck with by your tool, what then? Be efficient, stay oriented, come off the wall and use of both hands to feel for victims.

Keeping Oriented By Contact With The Wall/Door/Object

This technique is quick, maintains orientation and allows for a tool to stay in reach. A floor that is compromised or changes terrain can be identified with the tool. This also gives the ability to free up both hands for a sweep while accurately feeling for victims. This sweep is efficient if there is a need to progress through the structure, by not having to go back for a tool. If there was a catastrophic event, the tool would be nearby to assist in egress.

By not coming off the wall, searchable real estate will be neglected.



Keeping Orientated By Using Your Tool

This technique is hasty, gets the searcher off the wall, and allows for a deeper sweep when needed. Orientation is maintained by using a tool as a directional indicator, towards a wall, door or egress. It allows both hands to sweep with an accurate feel for victims, and keeps your tool near by to feel for compromised flooring or sub-grade terrain. If there was a catastrophic event, the tool would be near by for use.

In high heat, zero visibility searches, you are able to come off the wall and complete a search throughout the structure.



Extending The Reach With A Tool

This method can be efficient, until an object is struck that needs to be further investigated. The more sweeping performed with a tool, the quicker and greater the shoulder fatigues, which results in less control. To be proficient, you must have realistic training, it is not typical to strike civilians with tools in low visibility training scenarios. Every firefighter knows what a human feels like with gloved hands, second nature matters when seconds count. Depending on the structural layout, swapping the tool to the other hand may be needed to perform a full thorough sweep. Sweeps can be performed with either contact, situational awareness or tool orientation.

Using The Halligan For An Extension

Sweeping a 12Lb. Halligan with a fully extended arm is difficult. After a hand takes hold of the forks, that 30" bar is at best a 24" extension.

If the Adz/Pike end are oriented in the down position. This creates an increased friction that is hard to overcome with a fully stretched arm, but semi-protects our victims from the pike and adz. This friction exponentially increases on certain types of flooring such as carpet, which is prominent in residential structures where most of our victims are located.



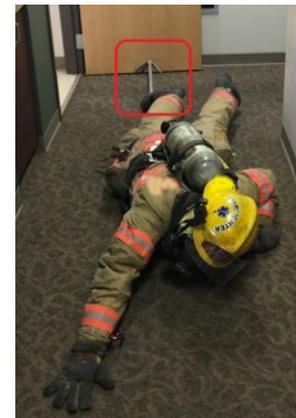
If the Adz/Pike end are oriented in the up position; this helps overcome the friction, but fatigue will still result from continuous sweeps. Striking a body (especially the head or a child) with the adz or pike can be traumatizing.

If the Fork end is used to sweep, friction is decreased due to less distal weight and because of the bevel of the tool itself. During a search the halligan is typically oriented with the adz/pike down and in front to feel if the floor terrain drops or is compromised. Having to reorient the tool during a search and use or hold it in ways we typically don't, reduces efficiency.

Oriented By Tool Contact With A Wall/Door/Object

This technique gets the searcher off the wall and frees up both hands to feel accurately for victims. By using the tool to contact the wall, door or object the searcher can stay oriented. It is easier to feel the tool with a foot, if the fork is contacting the wall and the adz/pike are down. Either halligan orientation can be used.

The method can be slow and unidirectional decreasing efficiency. When searching to the side of the tool, the halligan can be inadvertently kicked out of position, losing orientation. The searcher has left the tool behind, not allowing to check for compromised flooring, sub-grade terrain, or in case of a catastrophic event. Unless it's just a quick entrance sweep, the searcher now has to go back to retrieve the tool before advancing.



Our objective is to search for and locate any and all victims within the structure in the quickest means possible. We have to commit to the interior, we have to fulfill our promise to THEM. Understanding building construction and floor-plans and having situational awareness is the most efficient way to search and stay oriented. Whatever technique you choose, know why you use it and train on it.