

The Winning Edge

ED SANTOS

GAINING THE ADVANTAGE IN LOW-LIGHT ENVIRONMENTS



There is more to operating in the darkness than knowing how to hold a flashlight.

First, let's look at the eye. The retina—the image transmission center of your eye—contains two types of photoreceptors: rods and cones. The cones provide you with color and detail in the light. In the dark, the rods take over and allow you to see movement rather than fine detail. The cones are highly concentrated in the center of the retina. The absence of rods in this area demonstrates why off-center viewing is so critical at night.

It's also important for you to know that night vision deteriorates very quickly as you age. The amount of light you need to see at night doubles every 13 years. That means that the average thug sees a lot better in the dark than you do.

But regardless of age, nobody really sees that well in the dark. Your vision is typically 20/800 during your initial exposure to a darkened environment.

It has been my experience that many agencies fail to understand the critical need for realistic low-light training. This is a problem because most attacks on police officers and most officer-involved shootings occur at night or in low-light conditions inside buildings.

Many firearms instructors spend the time allotted to low-light training teaching popular flashlight techniques that have been around for years. That's OK to a point. Flashlight techniques are important and need to be understood; however, there is more to operating in the dark than knowing how to hold a flashlight.

PHYSIOLOGY OF THE EYE

Officers need to develop greater understanding of the physiological and psychological aspects they will encounter while under stress in the dark. A comprehensive understanding of these factors will allow you to train in the techniques that work for your particular environment and personal limitations or capabilities.

You need to understand that these factors affect everyone who operates in low-light environments, good guys and bad guys alike. Developing the knowledge, tools, tactics, and techniques to “rule the night” and not merely exist in it could save your life.

The following are some general factors for you to consider as you begin your study of low-light tactics and techniques. A great place to start to improve your low-light survivability is by studying the physiology of the human eye and the affects of body alarm response (BAR) in the dark.

TRICKS OF THE MIND

People often say that darkness plays tricks on them, and they are right. Although it's actually your own brain that's the trickster.

In low light, your mind will try to fill in what your eyes can't see. This becomes even more difficult to manage under stressful conditions.

People used to talk about the “fight or flight” response. Researchers have recently coined new terminology for this response: “body alarm response.” BAR is your body's response to the high stress of a life-threatening attack situation.

BAR is even more intense in low-light conditions. Regardless of light conditions, the most immediate visual change during BAR is that your eye will lose its ability to maintain clear focus on targets at close distances. This phenomenon, which is magnified by darkness, means that during the first few seconds that you experience BAR you will be unable to focus on the front sight of a gun. Your visual focus will be drawn to infinity. This is sometimes referred to as getting “big eyes.”

“Tunnel vision” or “perceptual narrowing” can be explained by the physiological and psychological changes that accompany BAR. As humans we have an innate tendency to narrow our attention upon a threat during extreme stress.

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VISUAL PATIENCE

One way to compensate for the effects of BAR in low-light conditions is to practice "visual patience," a term that I have coined to describe the act of leaving your light on long enough to identify what you are viewing. Emotions of the fight and visual patience are often mixed or confused when we attempt to analyze the high stress environment of a gunfight. I often see a lack of visual patience during live fire low-light drills and in the use of low-light force in force training scenarios.

On the live fire course, I often expose the student to multiple "bad guy" targets. Typically these are full-color realistic silhouette targets of bad guys holding a variety of weapons. But to raise the intensity of the live fire drills, I also introduce 3D mannequin targets that are dressed in clothing to add a sense of realism.

I sometimes replace the weapon on one of the targets with surrender hands to create a subtle change in the overall appearance of the bad guy. Students typically do

not take the necessary time to make the appropriate target identification. They fail to have the visual patience to properly ID the target as a surrender target and wind up shooting a target that should have been treated as a no-shoot.

You should spend time training under similar conditions as those mentioned above. Get together with teammates and create scenarios that require visual patience. These scenarios can be practiced during live fire or conducted during briefings using airsoft or guns. The key is to make the scenarios fun and challenging in a way that you must use visual patience in order to be successful.

If conducted at the shift level, these exercises will have the additional benefits of developing teamwork, building confidence in your partners, and providing supervisors with a benchmark of the participants' collective skill levels.

LIGHT AS A FORCE OPTION

Imagine that you can disorient your



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suspect for five to seven seconds using only your flashlight from a distance. Would you do it? I bet you would.

You can tremendously improve your ability to win at night by placing the hot spot of your light in the suspect's eyes. By doing this, you reduce his or her ability to see you clearly and mount any type of attack as you approach.

Temporarily blinded, the suspect cannot assess your physical conditioning or your size, determine if you are alone, or look for an escape route or cover. Would you find any advantage to putting your suspect in a situation that would require 90 seconds for him to regain a diminished ability to see? Would you consider this to



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be a tactical advantage for yourself? Sure you would. Try it, you will like the results.

If you have a quality light source and you know how to use it, you can gain the advantages as stated above every time you confront a suspect in a diminished light environment. I can't stress enough that in order to see these results you must have training, quality equipment, and the confidence to apply the techniques.

If you are to have a reasonable expectation of disorienting a suspect, you must be confident that the light flashed in his eyes is free of any imperfections. Make sure the light you select and use will project a clean beam/pattern free of any dark spots. I also suggest that you choose a light with a minimum of 80 lumens.

Typically we utilize tactics, training, and troops to overcome many of the situations that face us. Look at the effective deployment of a quality light as another tool to help you win.

You will often be in a diminished light environment when you are confronted

See Ed Santos present "Low Light Officer Survival" Aug. 26 at TREXPO East.

with a lethal encounter. The very fact that you are in less than desirable lighting conditions means that you more than likely will use some type of artificial light. But, as stated earlier, most of you only use the light in a traditional sense. In other words, to navigate, investigate, or communicate.

There you are in a low-light environment with the flashlight in your hand and you need to take some defensive or offensive action as a result of the suspect's actions. Does it not stand to reason that if you can gain the advantage (either defensive or offensive) by deploying the tool you already have in your hand, you should do it?

The advantages of such actions are many and go way beyond reaction time. When you consider the reduction in motor skill performance, the time wasted as you decide what tool to deploy, and discarding the light that is already in your hand, the advantages are apparent. You will extend both your re-

action time and your movement time if you choose to deploy a tool other than what you already have in your hand.

Don't misunderstand me; I am all about getting rid of anything that will not benefit you during those critical situations. This is the cornerstone of my article. At a minimum, the coordinated, efficient deployment of a quality flashlight is a tremendous equalizer.

The single most important thing you can do to improve your survivability on the job is to improve your understanding of operating in the low-light environment. Never before have we had the tools, access to the knowledge, and clinical research available to truly "rule the night." 🎯

Author and trainer Ed Santos has been teaching firearms and tactics for more than 25 years and has studied low-light operations for more than 20 years. He is a retired Army officer and is a reserve deputy in north Idaho. He will be presenting a class on low-light tactics at TREXPO East.

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