From Silver to Eagle 2: The Science of Practice

In this guide you will learn how to properly learn using repetitions and adaptations, achieve 1000+ point deathmatches, improve your practice sessions, perfect your spray pattern, use educational psychology, science and more, to help you improve your game.

Introduction

Let us focus on what happens before matchmaking. This guide will aim to help you understand how the brain learns through various factors, and how you can apply these to improve your practice sessions. The guide will also explain various practice techniques that I have used throughout my Counter-Strike: Global Offensive career to help me reach the rank of Supreme Master First Class, as well as help my students improve.

Now, I want to start off by mentioning that the brain is really good at two things: ADAPTING, and RECOGNIZING PATTERNS. Adaptation consisting of the mind and body finding changes and changing itself accordingly, and recognition of patterns through repetition and instant feedback. I will talk about these two things later in the guide to help you understand.

As a result of this, I have divided the guide into a couple of sections: First, we will discuss REPETITION, show how your body recognizes patterns, and explain how you can use this to improve your muscle memory. Next will be the ADAPTATION section, where we will discuss how the body reacts to variables and its importance whilst practicing. Afterwards, the PRACTICE section will guide you through the importance of practicing and how to start. Then, the EXERCISES section will showcase various exercises (consisting of educational psychology and science) that my students and I utilize to help us improve. Finally, I will say my final thoughts and give my conclusion.

Note that this guide will focus on the aspects of practicing. I would recommend you to also read my previous publication, "From Silver to Eagle: Improving Your Game", which can be found on Steam. The first guide talks about how to shoot, move, peek, find your appropriate sensitivity, use psychology to gain advantages, tips on clutching, and many more topics. Everything you need to go from Silver to Eagle just like thousands of students have accomplished.

Anyways, let's get started with our first section: Repetition.

Repetition: "It's Easy as A, B, C"

The mind loves REPETITION. It lives it. It is constantly seeking it in everything we do, think, feel, taste, and hear. It loves to create PATTERNS and use them to create knowledge. For example, if you analyze "A, B, A, B, A…" you should realize that the next letter in the pattern is B. Some patterns are easy to understand like the last one, but some, are a little bit more complicated for your

brain to realize at first. Whether that is waking up and brushing your teeth, covering your nose with your elbow when you sneeze, or even when shooting at an enemy in CS:GO, your mind sees every engagement as a pattern. Let us categorize the pattern of shooting an enemy as such: “A, B, C”. A will represent you seeing an enemy, B will represent shooting, and C will represent the aftermath.

A consists of visual stimuli. One constant that happens throughout the game is sight. We are always seeing, so the first step is observation and analyzing the situation. Seeing what gun you have, where the enemy might be in the map, what the in-game timer is, etc.

B is the process of shooting. Another thing the mind loves is INSTANT FEEDBACK, which I will talk about later in the guide and how it helps when shooting. Based on the observations from A (what gun we have, where the enemy is and such), our mind sends a message to the body where it needs to place the crosshair, when to shoot, and where to counter the recoil. Your body then decodes this signal and aims, shoots, and begins to eliminate the enemy.

C is the aftermath. Once you finish shooting, you end up observing again. You may be observing your dead body as the enemy continues pushing, meaning information for your team, or you may be observing the killfeed expressing your successful kill to everyone on the server. You gain confidence from making the situation a 4v5, satisfaction from killing an enemy without you taking too much damage, and you can also gain information about what happened and what the rest of the enemy team might be doing.

Repetition: Putting the “A, B, C” into Practice

Now let’s apply this pattern into an example. Let’s say you are playing DUST 2 as a CT, you are in B site and one enemy is coming towards you from tunnels. You peek and you see him, this is A, you see him and you see what gun you have, let’s say you have an AK47. Next is B, you know that the recoil of the AK47 is up and to the right, so you shoot down and to the left. You shoot accordingly, and counter the AK47’s recoil to successfully get the kill. Now you get C; you get the satisfaction of you contributing towards winning the round for your team, the knowledge that you hit the shots and that you outplayed him, as well as the knowledge that he will not have an AWP next round because he just lost it, and a lot more based on the situation. This is how your brain sees the engagement.

The more you repeat this process, the more your mind will start to realize that it is a pattern. Once your mind realizes that it is indeed a pattern, it will start to test itself by guessing and automating the process. Your body does this instinctively. Your mind and body will realize that if they A (See an enemy), it has to B (shoot and counter the recoil) in order to receive C (the aftermath and its benefits). Your mind will automatically automate the process so that next time you see A, you will be getting C, because your body already knows that B is next and shoots for you, countering the recoil, without you even having to think about it. It is truly amazing and most high-ranked players can describe the feeling. This is what most call MUSCLE MEMORY, and it’s something I explain and talk more into detail in my previous guide.

Now let’s talk about the second aspect in practicing, Adaptation.

Adaptation: The Master Adapter in You

Now that you know how good the brain can be at finding patterns to learn from, it is also good at spotting changes in the patterns and ADAPTING to them. Just like how your body shivers and creates heat when you are feeling cold, a change can create your body to react differently. This is also why I recommend my students to not change their settings too often. If you change settings and play, your body will being to adapt to the new settings, and once it finished adapting, it will start to

learn from it. If you are constantly changing settings, you are not letting your body adapt and learn, and instead it is having to remove old knowledge and replace it with new knowledge every time you change; all of this, whilst playing matchmaking. This can happen with any change in resolution, sensitivity, crosshair, DPI, viewmodel, or everything else. You must give your body time to learn and adjust, meaning more practice time and warmup times.

A good time-frame for change is a week. Change your settings, then play and practice with them for a week. A week should be long enough for your body to have adapted to the new changes, but without forgetting your old muscle memory in case you want to revert back. I would also recommend you to write down what your original settings are, and what you're changing them to. You don't want to be stuck because you don't know what your old sensitivity was and cannot get your hard-earned, old muscle memory back. Trust me, it has happened to me and it is not as fun as it sounds.

Now that you know how your body learns, let's talk about Practice.

Practice: The Theory of Fundamental Principles

Now that you know how the body learns from patterns and adaptation, let me explain some exercises that take advantage of this instinctual behavior. By far, the best way to practice is to just PLAY. It doesn't matter what you play, as long as you are playing and providing your mind and body with repetitions and patterns to learn from.

I have a learning theory that I like to call "THE THEORY OF FUNDAMENTAL PRINCIPLES" which I created and have used to become an autodidact, or someone who teaches themselves, and also used it to create the Silver to Eagle Guide series. I used this theory to learn pretty much anything extremely fast, and help me enjoy the benefits of its knowledge more rapidly. It states that if you master the fundamentals of a subject, you will create a strong foundation to continue learning from, and help ease the expansion of your knowledge of said subject. This way, the advanced topics will seem like a simple add-on to your previous knowledge. An analogy I like to use is "A healthy tree needs a strong and thick trunk in order to achieve stronger and thicker branches". The trunk being the fundamentals, and the branches being the various small "advanced" topics. Makes sense right?

"Well what does this have to do with CS:GO?"

One thing you are doing most of the time, and the basic core of all gamemodes in CS:GO (the trunk of this tree), is shooting. So if you master shooting, in the end you won't have to think about it and you will be able to use that free brain space to think about tactics, psychology, and many other things. You will let MUSCLE MEMORY take control so that you can think and play at a higher level.

Practice: Why it Matters

The preferred and recommended method of practice for my original students and I, has to be DEATHMATCH. I prefer Official Valve Deathmatch servers, since they are 64-tick, like matchmaking, and are easy to access from the main menu. I completed 400 hours of pure deathmatch before I played my first ever competitive matchmaking game. After 400 hours, I was completely shaped. I went from not knowing how to control recoil, to getting called a hacker because I was pulling off 1000+ point deathmatches in full lobbies by one tapping with the AK47. Thanks to deathmatching, I started as a Master Guardian I (AK1) after my first 10 matches.

The second preferred method, and one that I have talked about in the previous guide, is the use of the Training_Aim_CSGO map that is on the workshop. You can read more about this training method, and how to use it, in the first guide.

Practice: The Importance of Instant Feedback

Before, I mentioned that the mind loves INSTANT FEEDBACK, so let me explain how this can be used to practice. Going on an offline deathmatch with bots, and enabling “sv_showimpacts 2” in the console, will lead to you seeing where your shots land, and will provide INSTANT FEEDBACK for your mind and body to use. Note that this only works when the server is set to “sv_cheats 1” and may not work in public online games. Your body can use this information to see immediately if it needs to adjust your crosshair or recoil to successfully land a shot in real time. It resembles the “hitmarker” from other games and helps you know if you hit an enemy or not. This can be used to know if you need to adjust anything like lowering your spray, bursting more closely, or one tapping instead of spraying based on distance.

This is how sv_showimpacts 2 will make your bullets look. You can extend the time that the bullets stay on screen using “sv_showimpacts_time” followed by how many seconds you want it to stay showing. Ex.”sv_showimpacts_time 10”.

If you do want to create your own lobby, I will explain how to create your own. If you already know how to create one, you can skip the following section.

Practice: Starting an Offline Deathmatch with Feedback

In order to create an offline match, first you must click on the PLAY tab on the Main Menu of CS:GO and click the OFFLINE WITH BOTS sub-tab. Then, click on the map you want to start on and then hit green button, labeled "GO", on the bottom right. Make sure the first bullet assigned to NO BOTS is selected (or if you want bots you can click the next bullet for “Harmless Bots”) and click GO and wait for the map to load and finish.

Once you're in the map, make sure developer's console is enabled. You can do so by clicking HELP & OPTIONS in your menu, then clicking GAME SETTINGS, and it should be the fourth option from the top labeled "Enable Developer's Console (~)". Make sure this option says "Yes" and exit the menus.

Once developer's console is enabled, press the tilde key (~), which is mostly located on the top left of your keyboard layout, and a gray window will appear with a text box below. In this text box, enter "sv_cheats 1" (without the quotes) and hit enter, then enter "sv_showimpacts 2" (again without the quotes) and hit enter once more. Now exit the menu by clicking the X on the top right and shoot.

You should see your bullets being marked where they land. This INSTANT FEEDBACK will help you in showing what you need to change. You can also do this in demos and will show you the bullets of

everyone on your previous matches (although it may not be as accurate). Play around for a little and test your weapon accuracy and precision with this method.

Exercises: The Methods I Use and The Science Behind Them

If you have ever been to my livestream, you realize that I do a lot of unusual things when I deathmatch, but I can assure you that all these exercises have a scientific purpose behind them. Some of these exercises include: SNIPING CHICKENS to improve AWP reflex/accuracy/precision, achieving 1000+ point deathmatches with the help of AREA OF POTENTIAL HOSTILITY, utilizing an offline match to test my recoil management using techniques like the BELLY BUTTON SPRAY and MASTERING RECOIL PATTERNS, as well as more exciting exercises.

Exercises: Sniping Chickens

If you want to improve your awping, killing those little chickens that are running around is an extraordinary way to train. KILLING CHICKENS proves a challenge as they are small, and require a bit of accuracy to kill effectively in one hit. It helps improve hand-eye coordination, accuracy, flicking, and tapping with the AWP, as well as with any other gun. Killing chickens helped me get amazing aim when awping, not to mention my exponential growth in hand-eye coordination and reflexes, and also improved my long-range AK47 one-tapping ability. If you read my last guide you will realize that I mentioned a custom map called “Training_Aim_CSGO”. I used this map and all of its intense and fun game modes to help me improve my overall shooting. Something that helped my AWPing, for example, was the “reflex training” mode on the control panel on the left. It is hard, but with practice you can get really high hand-eye coordination and reflexes.

Watch the full GIF by clicking the picture or going to: https://addictedpro.files.wordpress.com/2015/11/chickengif.gif

Exercises: The Secret to 1000+ Point Deathmatches (Area of Potential Hostility)

The secret to my 1000+ point deathmatch scores, and my ability to predict enemy activity and peeks, has originated from my INTUITION SPOTTING. Looking at the map, and seeing where teammates are, and are not around, will help your intuition immensely. If you are in DUST 2, and your teammates are spawning outside of B tunnels, in B tunnels, and in B site, then that means that the enemy team are everywhere your teammates are not: in cat, long, and A site (maybe T spawn, and mid). If you and your team are taking control of an area, then the enemy team cannot control it without contesting, which is something that your team and you will be able to see. The enemy team is automatically in control of any area your team is not controlling or viewing, an area that I like to refer to as AREA OF POTENTIAL HOSTILITY, and this can be used to help you spot out where the enemy are, or might be, and will help you gain an advantage. AREA OF POTENTIAL HOSTILITY (AoPH or AoH) is basically the “area where the enemy might be”. This helped my intuition like no other, and also helped me spot weaknesses in my team that the enemy could take advantage of, if not addressed. It also helped me find loopholes in the enemy team and helps with strategy calling and tactics.

Here is an example:

Watch the full GIF by clicking the picture or going to: https://addictedpro.files.wordpress.com/2015/11/spottinggif.gif

In the GIF shown above, my team and I are playing Season. Shortly after the round starts, we do the obvious thing and try to push as far as we can to gain as much map control and also gain defensive positions. Once we have gained defensive positions, we use our sound (marked by blue circle) and vision (marked by green cone) to stop the AREA OF POTENTIAL HOSTILITY from spreading to our side of the map. Now that we are covering positions, we look at the map and imagine the AoPH, which makes it easier to see where the enemy might be. This, in addition to my experience, aids me in guessing that there might be at least one guy on the left side of the map (on stairs near me) and one near my teammate in B. 2 down, 3 enemies left to guess. From here, I guess that in mid there are 3, or 2 with the last remaining enemy helping out one of the enemies near A and B. After the game ended, I checked if my guess was right, and the result didn’t surprise me as I guessed right, which ultimately helped us win the round.

The important thing to notice is that this Area of Potential Hostility is always changing. When your teammate dies or moves (as well as your enemies), when the enemy team smokes or flashes (or your team), no matter the action, every single event will somehow affect this area. Sometimes it will decrease as your team pushes, or it will grow as your team retreats and lets the enemy take map control. In the end it is all an educated guess, but guessing to help you prepare yourself, mentally and physically (if something does happen), is better than being caught by surprise and dying.

Deathmatching, and using intuition, is a great way to practice and get accustomed to this gamesense. Just look at the map, guess where the enemies might be, prepare yourself for them to come (or push to catch them off guard) and you will perfect your INTUITION SPOTTING and easily gain 1000+ deathmatches if you're aim is good enough.

If you want to learn more about INTUITION in competitive play, you can check out my previous guide to learn more.

Exercises: The Belly Button Spray (Beginning Exercise to Controlling Recoil)

Watch the full GIF by clicking the picture or going to: https://addictedpro.files.wordpress.com/2015/11/bellybuttonspraygif.gif

If you want to improve spraying, you can also exercise something I like to call "THE BELLY BUTTON SPRAY". Most weapons' recoil start off in an upward pattern, so you can use this to your advantage and start getting used to controlling recoil. The BELLY BUTTON SPRAY is a spray that starts at the head, and ends at an enemy's lower abdomen area, or around the crotch, after a couple of bullets. It is important to note that I call this technique the "Belly Button Spray" because of the use of the belly button as a guideline, not necessarily because it ends at the mid-abdomen region.

The rate at which you have to pull down your spray, as well as how many bullets to spray down, varies from weapon to weapon but the difference is not that significant. This only works in short to medium range shooting, but helps with spraying and helps you eliminate enemies due to the higher headshot frequency of the spray, and with repetition, can result in overall better muscle memory and spraying/bursting efficiency.

Exercises: Taming the Beast

Watch the full GIF by clicking the picture or going to: https://addictedpro.files.wordpress.com/2015/11/negevgif.gif

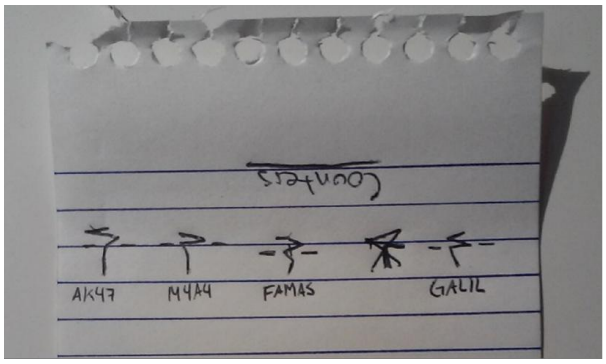
Using the BELLY BUTTON SPRAY from above, one of my favorite exercises is the NEGEV BURSTING. People always comment that the Negev cannot be controlled, and I have proved that you can control it and, in fact, deal high amounts of damage to various people accurately and precisely. If you can control the recoil in the Negev, all other weapon recoils will seem easier since the Negev holds the trophy for the weapon with the craziest recoil. This doesn't necessarily mean to spray, although that is controllable too, but bursting will help you handle the recoil and apply more damage easily. Not only does this help you get better with a Negev, for any situation that demands it in competitive matchmaking, but it also helps you improve your recoil control, pulling down, and bursting of other

weapons. Whenever I feel like the AK47's beginning vertical recoil gets too hard to handle, I do a game of deathmatch with the Negev and I find pulling down with the AK47 easier.

Exercises: Mastering a Spray Pattern (Intermediate Recoil Control)

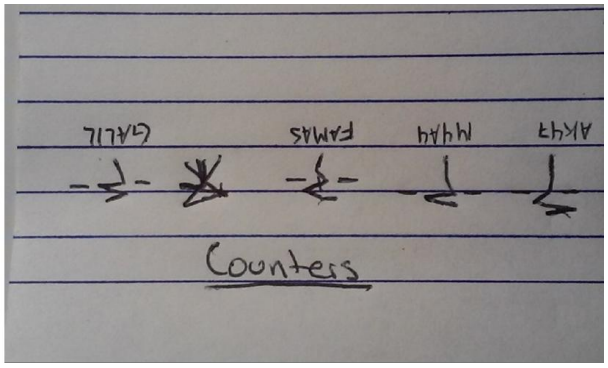
Now, the belly button spray only works for achieving an average spray pattern, and for the beginning of the spray. If you want to MASTER A SPRAY PATTERN, you must do your research.

I would recommend that you face a medium-range surface that can show bullet holes, or using "sv_showimpacts 2" (remember that you must have both developers console and "sv_cheats 1" enabled), spraying a magazine without moving your mouse, then finally analyzing the resulting spray. Now that you have sprayed at a medium range, you will be able to see the changes between each bullet course more dramatically than in a short range spray. This will help you spray at medium distance, and therefore make it easier for you to spray at a shorter range by default. Now, follow the spray with your crosshair only. Repeat following 2-3 times, then mimic the spray in the opposite direction. If the spray goes up and to the left, you will go down and to the right. Now, the inverted pattern should be what you need to follow in order to counter the recoil. If the recoil goes up for 4 bullets, left for 3 bullets, then right for 3 bullets, in order to counter it, you must pull down 4 bullets, then go right 3 bullets, then go left for 3 bullets. Like I mentioned in my previous guide, writing down information has proven to help retain that information and help your brain memorize it. This being said, I have a quick sketch of my most used weapons' recoils in front of my keyboard for when I forget the spray pattern, or to help me out after playing all different kind of games besides Counter-Strike. You can also search for the spray patterns online, but doing it yourself in-game will help you gain a better understanding in a more hands-on and practical approach.



My own personal cheat sheet that I have used for many years with my most used weapons.

A cool trick I like to do is called the CHEAT SHEET. This cheat sheet is exactly what it sounds like; a sheet of paper that includes notes that facilitate the retention of information. This trick helped me a lot when I used to come back from not playing CS:GO in a long time or when I just didn't feel my recoil management was correct. Like I mentioned above, try to copy down the recoils of all your most used guns on a piece of paper, and label each one so you don't get confused. This doesn't have to be pixel-perfect, it is just there to give you an idea of how the recoil approximately goes.



Flipping the paper upside down will show you have to move your crosshair and mouse to successfully counter the recoil.

After this, turn the paper upside down. This UPSIDE DOWN TRICK makes the recoil go from the original recoil pattern of a weapon, to the COUNTER-RECOIL that you need to follow in order to perfectly fire a weapon and counter all of its recoil. Now that the page is upside down, test it by getting one of the weapons on that list and trying to copy the upside-down pattern as you spray, you should see that your spray is tighter and more collected. Notice how I mark the sides of the crosshair with two lines (- -), these lines show when the crosshair loses the vertical recoil

and starts swaying horizontally. Instead of just marking over the previous line and making it impossible to see the change in recoil, I extend the line vertically so that I can clearly see how the spray moves. This tells me that when I reach that stage of the recoil, I should stop moving vertically and just worry about replicating the horizontal movement.

I would also recommend that you don't directly copy my CHEAT SHEET and create your own, as some people "see" the recoil differently and each have their own way of remembering (also my cheat sheet is not perfect). I only provided the pictures for examples.

Exercises: The Advanced Art of Spraying Moving Targets (Advanced Recoil Control)

Now, hitting a standing target is one thing, but hitting a moving target, consistently, is another totally different topic. This is what separates the good players from the really good players. Note that this is an extremely difficult technique and takes a while to perfect; it should also only be attempted if your recoil management is at a very high level. This technique consists of utilizing your recoil's horizontal magnitude to kill an enemy effectively. One example is a clip from my FRAGMOVI3 montage.

Watch the full GIF by clicking the picture or going to: https://addictedpro.files.wordpress.com/2015/11/m4a1_rafters_clipgif.gif

Notice how I used the M4A4's horizontal recoil to take care of the third enemy coming out of hut. The M4A4's recoil goes like this: Initial vertical recoil, then left for a little, then right for a little, then stays in the left. I shoot the enemy in squeaky with the initial vertical recoil (and a little of the left recoil), then I turn and kill the first enemy coming out of hut with the rest of the vertical recoil and the right recoil, then I just move my crosshair a little to the left, and let the left recoil, that the M4A4 finishes with, take care of the moving enemy without me having to move.

This is important because if I were to have moved my crosshair to the left whilst spraying, and place my crosshair on the enemy, I would've sprayed into the ledge next to me, which would've led the enemy to remain alive and increase the chance of killing an ally or myself.

This technique takes a ton of practice, but it is definitely not impossible, and you can imagine the ease and the skill that it provides in competitive matchmaking. Most pro-players know how to perfectly utilize this technique and is very active in professional matches if you analyze how they spray.

Exercises: Removing Habits with The "Set and Forget" Process

Now, you have learned how to create new knowledge by finding and utilizing patterns, but what about that old knowledge that you want to get rid of? If you remember, I mentioned how good the body was at ADAPTING to new changes. Well you can use this instinctual behavior to help forget unhealthy habits for good. SET AND FORGET is a process I have used myself (and taught my students) to forget old habits not only from CS:GO but other games as well. When your body has already set a pattern to learn from, and you want to remove the habit, the only solution is to completely reteach yourself and reset the habit. Now, this may sound like a long time, but remember that the body is a master of adaptability.

For example, if your body is used to crouching when shooting, and you want to stop, all you have to do is unbind the crouch key, from the in-game keyboard settings, and play like such. Your body will press the button to crouch, but will realize that nothing happened, and with time, it will adapt and learn to shoot without crouching. This can also be done with many other habits. Another personal example was when I used the process to stop the habit of reloading immediately after eliminating an enemy. I used to die reloading with 20 bullets left in my magazine, all because of the old habit from previous video games. I used the process to unbind the recoil key and play without reloading. In time, I rebounded the reload key, but I only reloaded when I had 5 or less bullets in the magazine, or when I knew I wasn't going to be in immediate danger. I want to express how this method, specifically, is a good technique to remove old habits ONLY while practicing; as playing competitive matchmaking with an unbounded key, like crouch or reload, may lead to unwanted results as the keys are sometimes crucial in certain situations.

Ending: Final Thoughts

This concludes the lesson! This is the part where I ask my students if they have any questions and answer them. No matter how "stupid" you think the question is, asking questions is the best way to learn, and someone else might have the same question you are having; so ask away! I am always happy to help and usually answer questions as fast as I can.

I also want to express that this is not the only way to practice. There are hundreds upon hundreds of different ways to get better at the game, but this is what worked for me, and my original students. Using science (and a bit of educational psychology), you let your body gain information that it can then use to learn.

These methods also work for all-kinds of games, not just Counter-Strike. I have used similar techniques and can vouch to say that my body quickly adapts to new games and their recoil, meta-game, and overall gameplay. The point of this lesson is to make you realize that in order to play better you don't need to play more, you need to play SMARTER.

Ending: It's Just a Game

Just like I mentioned in my previous guide, you always have to remember that this is just a game and a game is designed for people to have fun. Nobody can realistically win every single time, losing should not be the end of the world, and there is no need for that to affect your daily life. In the end, it's just a game, and you're supposed to have fun. So enjoy it!

I also want to thank you guys immensely, once again, for reading the guide. I hope to have taught you something useful to help improve your practice and hope to see you game better in the future. You are always welcomed to add me and ask me any questions or even play games with me from time to time. I love spending time with each one: playing, watching, talking, etc. I really do enjoy it and love to give every person a unique experience.

You can also check out my website (http://www.addictedpro.wordpress.com) for more information about me and The Addiction. Share this with your friends and also help them improve! I made this guide to help further improve the Counter-Strike Community and help make it even better. Stay awesome, stay smarter, and most importantly, Stay Addicted.

I also want to give a huge thank you, specifically, to everyone who has supported me thus far, and helped test this guide. I also want to thank my 500,000+ students who have improved and even joined competitive teams. Thank you and I am extremely proud of each and every one!

Extra Notes

Official Silver to Eagle Student Group! http://steamcommunity.com/groups/SilverToEagleOfficial where you can meet and play with other people with the same determination as you! GAME ON!

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