

COMPANION HEAL THYSELF

current version: 1.5 - released 1/10/2022

by Greslin

"So what's the angle here?", Piper asked, notepad in hand, staring at the titanic mountain of claw and scale that was rushing up the hill towards her. "Uh.. Blue? I don't think he's happy."

And then WHAM: with one heavy swipe, the Deathclaw smacked Piper off her feet and against the rusted wall of a nearby abandoned trailer, sending her into a land of purple lights and double images. Blue checked her own ammo and mentally tallied stimpaks as the Claw slowly turned its head in her direction.

Piper was alive. That was the important thing. Blue could see her gradually coming to her senses, fumbling for a stim of her own. Meanwhile, the monster had lost interest in its crumpled foe, and was now moving towards Blue. Blue would need to keep its attention long enough for Piper to get to safety.

Blue checked her ammo again. Six .45 rounds. Sigh. This would take some doing.

DESCRIPTION

Traveling the Commonwealth, it's frustrating to no end to be locked in a mortal battle against the invincible forces of atomic darkness, only for Piper to go down YET AGAIN and force you to backtrack with a Stimpak.

Really, Piper. You know I got nothing but love for you. But can't I just give you a few Stimpaks to sort this out for yourself?

With this mod, you now completely customize the companion bleedout/recovery process to suit your tastes.

NOTE FOR PACE USERS

If you are using my companion AI mod, [PACE \(Pack Attack Companion Edition\)](#), please be aware that the full functionality of Companion Heal Thyself has been incorporated into that mod. CHT will not attempt to apply its system to any companion currently under control of PACE. It will also shut itself down in the event that it detects PACE running on the same companion.

CHT is still available as a separate mod for those who want the autoheal functionality on a companion without the additional features of PACE.

WHERE TO GET IT

This mod is currently and freely available [for download only on the GreslinGames Discord](#).

Please read the **#read-this-first** channel when you join!

This manual is ONLY accurate for the current version of Companion Heal Thyself.

ON BETHESDA BUGS

In 2016, fellow mod author **fadingsignal** discovered a rather nasty bug in Fallout 4 and posted about it on Reddit. [You can read his post here](#).

Basically, Bethesda devs had a problem where a magic effect would be on a piece of armor, and the armor would be worn by a companion, but the effect would remain on the companion once the armor was removed. It was an annoying bug that Bethesda “fixed” by transforming it into a near-catastrophic bug.

They fixed the original bug by *forcibly (and permanently) removing all magic effects* from the companion once the armor was removed. It was reported as a bug back in 2016, but for whatever reason, Bethesda never bothered to fix it and it remains in the game to this day. Since this bug is in the engine itself, it also can’t be fixed by the modding community.

I encountered this bug in 2021 during early development of my AI mod **PACE (Pack Attack Companion Edition)**, which [used a cloak magic effect to attach its script](#). Whenever I swapped the companion’s armor, the script would mysteriously shut down and I couldn’t start it back up. Once I finally tracked the problem down to that Reddit post, I realized that Companion Heal Thyself - which used the same cloak activation method - would likewise be affected.

It wasn’t until late in 2021 that I figured out an activation workaround for PACE that didn’t rely on magic effects. The same solution is implemented in v1.5 of Companion Heal Thyself.

If you are using a pre-1.5 version of CHT, obviously, an update is strongly recommended. Any earlier version will stop working as soon as you change your companion’s armor.

FEATURES

This mod does not require Survival mode. It should work the same at any difficulty.

Auto healing. When companions drop below 50% health (level configurable in MCM), they will use a Stimpak from their own inventory to heal automatically. Includes an animation of the companion stabbing themselves in the shoulder with the Stimpak.

Bleedout recovery. When companions reach "downed" (i.e. bleedout) state, they will use a Stimpak from their inventory to recover. If they don't have any stims, normal bleedout recovery rules apply.

Stunning. Companions sometimes will be stunned instead of dropping into bleedout. If they are stunned, they will eventually recover without the need for a Stimpak. (See "Stuns", below.)

Support for ALL and ANY companions. The recovery script is applied dynamically to any NPC in your presence who belongs to the CurrentCompanionFaction faction. This includes vanilla and DLC companions, robots, modded, all of them.

Support for multiple companion mods. This script should now support any number of simultaneous companions without any problems.

Dogmeat (and other dog) support. Any canine companion, vanilla or modded, can be supported either as a normal autostimming companion, or with the use of an optional Red Bandana of Stimming.

No overwriting of any base records or assets. So risk of conflicts should be virtually nonexistent.

QUICK STIMMING

Companions have a general healing rate that thus far has defied my every attempt to find and kill it. So left alone, an injured companion will soon restore to full health on their own.

The problem is that in some situations, it still doesn't happen quickly enough. With CHT, companions with health below a certain point (50% by default) and some Stimpaks in their inventory will give themselves a quick jab and an HP boost. Sometimes this can make the difference in a tough fight.

As this can lead to a waste of good Stimpaks, CHT includes MCM settings for adjusting the quick stim HP threshold, as well as an option for holding some Stimpaks in reserve. By default, companions will no longer quick stim if they have 5 or fewer Stimpaks, saving them for bleedout situations.

Robotic companions are healed using the Robot Repair Kit introduced in the Automation DLC. This includes any robot or Gen 1 or 2 Synth. All other self-stimming followers use standard Stimpaks. (Note: Before anyone makes the case about Curie and X6-88, the game internally considers Gen 3 Synths to be human beings. Good enough for Bethesda, good enough for me.) This can also be configured in MCM.

BLEEDOUT

"Bleedout" is the state in which the companion has taken heavy damage, and is now collapsed on the ground, waiting for your help. In non-Survival modes, they remain down until you either heal them or until combat ends. In Survival mode, you must heal them. If you leave the area without doing so, they return to their currently assigned home base.

With CHT installed, companions respond to bleedout by attempting to revive themselves. If they have Stimpaks in their inventory, after a short period of time they will inject themselves and get back to their feet. If combat is still happening, they will get back into battle.

If they go into bleedout and have no stimpaks on them, they'll go into normal bleedout behavior. None of the code fires unless they have stimpaks in their inventory.

My intent for this mod was NOT to make it a cheat. However, an automatic self-healing companion poses a problem: you could now easily just load them with 100 stimpaks and a minigun, and then kick back with a Nuka Cola while they do all the work in bad situations.

To counter this, CHT:

- Adds random delays into the bleedout recovery process, ensuring that while your companion will recover, they will not do so immediately. Consider them stunned. They can remain on the ground for up to 30 seconds (random) before attempting to recover from bleedout. (During this period they are removed from combat, so the enemy should leave them alone.)
- Adjusts the companion's health after recovery to about 10% of their base health. If you are using the Companion Status HUD mod, you'll see their health zoom up to full and then drop down to the lower level. They will then wait for a very brief period, heal a bit, and then Stimpak themselves again if they are under 50% health. During this period, they are on normal alert and vulnerable to attack.

In my own tests, I've found that this adds a fun new dynamic to companion combat: the need to provide covering fire while your partner patches up. If you do not do this, they will likely continue to desperately attempt to recover, until they use their last Stimpak and must be rescued.

STUNS

Configurable via MCM, a "stun" occurs randomly when a companion otherwise would enter bleedout state. Stunned companions will not attempt to stim themselves, but rather will recover naturally after a certain amount of time. You can also optionally set them (via MCM) to not recover until the player exits combat. Likewise, if stun odds are set to 100%, vanilla companions will recover from all bleedouts without stims.

Stunned companions can still be recovered by the player with a Stimpak.

Stun odds (default: 25%, but can be adjusted to 0-100%), stun recover time and post-stun health recovery can all be customized in MCM.

Note: For stunning to work, companion bleedout recovery must be set to ON in the "General Settings" MCM panel.

DOGMEAT

Dogmeat support is included via MCM. Switching the "Armor Keyword" setting to ON ties Dogmeat's new autostimming talents to his "Red Bandana of Stimming", which is also placed in the player's inventory via the MCM panel. In this mode, Dogmeat will only autostim when he's wearing the Red Bandana.

If "Armor Keyword" is set to OFF, Dogmeat will act like any other companion, autostimming per the "General Settings" parameters. If you want Dogmeat to simply have magic stim powers, leave "Armor Keyword" to OFF. If you want Dogmeat to continue without autostim powers of any kind, set this to ON and then don't equip the Bandana.

(Note: the Red Bandana of Stimming is only an example. To apply the same effect to a piece of Dogmeat armor, simply create a patch with CHT as a master, and add the "CHT_ArmorRequired" keyword to the armor piece.)

USING CHT

REQUIREMENTS

Companion Heal Thyself needs only the Fallout 4 base game and F4SE. DLCs are not required, but will be detected and supported if they are present.

MCM (Mod Configuration Menu) is necessary, obviously, for the MCM menu.

INSTALL/UNINSTALL

To install Companion Heal Thyself, use the “Install from file” option in your preferred mod manager. Then dismiss and rehire the companion. CHT will enable itself on the hire.

To uninstall (or upgrade) CHT, first dismiss your companion to shut down the CHT script. Then you should be able to uninstall at your leisure.

ENABLING CHT

Companion Heal Thyself applies itself to vanilla companions via three different methods, configurable in the CHT MCM menu. By default, CHT will apply to all companions hired using the vanilla companion hire/dismiss architecture.

To limit CHT to specific companions, you can set it in MCM to either “Opt-in” or “Opt-out”.

If set to “Opt-in”, CHT will apply only to companions with the **CHT_KW_EnableMe** keyword attached to their NPC record.

If set to “Opt-out”, CHT will apply only to companions that DO NOT have the **CHT_KW_NoEnable** keyword attached to their NPC record.

MCM

MAIN

Enable Mode - If set to ALL (default), CHT will attempt to apply its script to any companion on hire. If set to Opt-in, CHT will only apply to companions with the **CHT_KW_EnableMe** keyword on its NPC record. If set to Opt-out, CHT will apply to all companions EXCEPT those with the **CHT_KW_NoEnable** keyword on their NPC records.

GENERAL SETTINGS

Enable/disable companion bleedout recovery. If set to OFF, companions will not attempt to autostim themselves out of bleedout state.

Enable/disable companion quick-stimming. If set to OFF, companions will not attempt to use Stimpaks to boost low HP.

Post-bleedout HP restoration. When a companion recovers from bleedout, their HP will be restored to this percentage of their base health.

Maximum delay before recovery. When a companion is in bleedout, this is the maximum time delay (random) to occur before they attempt to recover.

Health threshold for quick-stimming. If quick-stim is ON, companions will use a Stimpak whenever their health drops below this percentage level.

Stimpaks held in reserve. If a companion has fewer than this many Stimpaks, they will not quick-stim, saving them instead for bleedout recovery.

STUN SETTINGS

Odds of companion stun. Random chance that any given companion bleedout event will instead become a stun.

Maximum delay before stun recovery. When a companion is stunned, this is the maximum time delay (random) to occur before they recover.

Post-stun HP restoration. When a stunned companion recovers, their HP will be restored to this percentage of their base health.

Wait for end of combat before stun recovery? If set to ON, stunned companions will not recover until the player is no longer in combat.

DOGMEAT/CANINES

Require Armor Keyword For Canine Auto-Stim? (default: ON) If this is ON, canines (such as Dogmeat) will only self-heal if they are wearing armor with the CHT_KW_ArmorRequired keyword. Use this feature if, for example, you want to limit CHT to use with something like a tactical vest or collar mod for Dogmeat.

Give Dogmeat's Magic Bandana - Clicking this will spawn an instance of Dogmeat's Bandana of Stimming into the player's inventory. This item has the CHT_KW_ArmorRequired keyword.

ROBOTS/SYNTHS

Use Repair Kits instead of Stimpaks for robots and G1/G2 Synths? (def: ON) If this is ON, CHT will apply Robot Repair Kits rather than Stimpaks on applicable robot companions.

DEBUG

Debug to log. (default: OFF) If ON, CHT will generate an activity trace log. For use in debug and troubleshooting only.

COMPATIBILITY

CUSTOM COMPANIONS

This mod autodetects the presence of any current companions belonging to the CurrentCompanionFaction faction. Nothing further is necessary to support custom companions. It should just work.

THANKS

Thanks to Greslin's Wife, as always, for continuing to tolerate my nonsense and letting me share her life.

Thanks to everyone on GreslinGames Discord for hanging around, playing with my silly little digital toys, and getting out there and making their own stuff.

Thanks to all those who have taken the leap of faith to try this mod, commented, and/or endorsed. Thanks also to all FO4 players willing to be flexible about how they play their games.

Thanks to Piper Wright, who has courageously suffered hundreds of direct gunshots to the face from her best friend Blue, and has done so without complaint - not that she remembers them later, of course.

Special thanks to vkz89q and shavkacagarikia on the Nexus Forums for their invaluable assistance in getting my head wrapped around Papyrus properties and passed actor references. It isn't the same world as FNV modding, that's for sure. 😊

Thanks to track1044 for pointing out how to do this with minimal mod conflict risks.

And thanks to Bethesda for the game itself. These games aren't always what everyone wants all the time, but Bethesda does a great job providing the tools to make their games everything an individual player may want them to be. FO4 is no exception.

Patreon: <https://www.patreon.com/greslin>
Come visit the [GreslinGames Discord](#)!

