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To preface, I play a Bloodied/Unyielding Low health commando build.  
Some comments in this Doc are in relation to my gameplay and playstyle in a manner of talking to/educating my friends.

All information is directed to Level 50+ Players who have access to all level-locked cards.



## **Mutations - How, Which and Why!**

In this Doc, I will explain **How** Mutations work and will affect your gameplay. I will detail **Which** 13 I use and **Why** YOU should use them too!

### **Mutations & the basics!**

Mutations are modifiers that change your character's performance both positively and negatively. On their own mutations are more negatively

impacting than benefiting and should be avoided. Along the cons of mutations are far too hindering and should be avoided but with the right Perk Cards, mutations are the greatest buff! There are 2 **primary/permanent** Perk Cards and 1 **secondary** situational Perk Card.

**#1. Luck 2\* Starched Genes** – This card has **two** key functions to making mutations work.

1. Never allow you to gain mutations through radiation. Any fashion of radiation accumulation will never bring on additional mutations.
2. Never allow you to lose mutations through radiation cleaning. Any fashion of radiation removal will never remove a mutation. You can use a decontamination shower and use Radaway with no loss.

**#2. Luck 3\* Class Freak** – This Perk Card is what makes mutations so viable. **At max rank, the negative effects of mutations will be reduced by 75%.** Without this card, you will be greatly hindered by many mutations.

**#3. Charism 1\* Strange In Numbers** – This card is situational because it requires other members in your group to have mutations. This is not always a possibility so this card is not 100% applied like the Primary 1 & 2 cards. **This card increases positive effects by 25% further boosting all the great qualities of mutations.** Again, this is only applied if other members of your group have mutations. This card also becomes situational in the sense that it is a 1\* card, It is cheap to apply while optional to remove. Not indefinitely necessary like Primary 1 & 2 but ideally always available.

You **NEED** 5 luck points allocated to maintain and subside the mutation effects. It is advised you take 1 charisma for a total of 6 spent points to fully utilize mutation potential.

### **How to get mutations:**

Mutations are gained through any accumulation of radiation. The player can be exposed to radiation by consuming radiated foods/drinks, walking/swimming in water, being near toxic items/locations, being meleed by certain enemies and many other factors. There is roughly a **1%:1 Rad** ratio to acquiring a mutation so almost anything you do could mutate you!

**You can also find a player vendor and buy/drink a serum of your choice that provides a specific mutation.**

**Serums are the best and safest way to enhance your experience in the wasteland!**  
**Serums can be crafted if the plans are purchased from the modus terminal for 20k/17.5k caps**

Serum plans are VERY expensive and are typically only found in high-level player vendors who have had excess caps at one point and decided to buy the expensive plans. Serums can often be very expensive to buy as well. Some people charge an outrageous price for them. This is because 1.

They are highly sought after 2. They require a fair bit of farming to craft.

If you are on PC you can add me xghoststrike. I sell all serums for 100 caps

Best prices in the wasteland! It would help if you messaged me on Reddit beforehand so I know to look out.

I am currently banned so I cannot login to sell mutations. You may still contact me however and I can reach out to my friends who can sell you any mutations at the same price of 100 caps.

### **How to remove unwanted mutations:**

**There is only 1 way to remove mutations and it is not a selective process but a RANDOM roll of the dice. You need to remove radiation.**

Using radaway or a decontamination shower has a chance to remove 1 random mutation as you cleanse radiation. If you have a specific mutation you want to remove, you will need to remove radiation and then acquire more radiation if you are fully cleansed and then remove it again. You must continually and repetitively try again and again until the mutations you want removed are gone. If you have mutations you want to keep, you will likely remove them in the process as it is a random selection process.

### **DO NOT USE RAD-X:**

If you take Rad-x to increase radiation resistance, **YOU WILL SUPPRESS ALL MUTATION EFFECTS FOR 1 HOUR!** Mutation suppression will cause all active mutations to become temporarily inactive. You will lose all positive and negative effects of mutation same as if they were never acquired. Rad-x will cause suppression for 1 hour and there is no removing the chem ontake. For the next 1 hour, whether you die or change servers, you will have 0 mutations until the rad-x wears off. If you heavily rely on the performance of mutations, you will be left stranded in deep waters under the suppression effects.

You can either sell all Rad-x or just drop it.

Underneath the Mutation description will be the **Pros:** & **Cons:**

If you see a "/" then the higher or lower number on the right Y side [X/Y] is the modifier AFTER either Perk Card is applied.

You can see more details in the listed images at the bottom.

**Pros:** / = *With Strange In Numbers* **Cons:** / = *With Class Freak*

**Adrenal Reaction: Less HP = More DMG.**

>Pairs best with an Unyielding armor and Bloodied weapon build.<

(Unyielding/Bloodied are Legendary effects that gain bonuses the lower the health you have.)

Without a dedicated low-health build this mutation still works well as you will always take damage and often be below half health from damage or radiation so you just get free damage for getting hurt.

Who can say no to free DMG?!

Pros: increasingly higher weapon damage with lower health. Up to [+50%/63%].

Cons: Reduced total health [-50HP / -12HP].

### **Bird Bones: Fall slower.**

> Pairs best with **Marsupial** and a Jet pack. <

**Marsupial** could cause fall damage without Bird Bones if you are not careful. **BIRD BONES DOES NOT REMOVE FALL DAMAGE**, this just helps lower the potential of it happening a bit. Pairing with a jet pack, this helps maintain airtime for longer and more efficient flying.

Who doesn't love flying around?!

As this mutation slows your fall speed, it increases the distance needed for landing stagger. If you fall far enough you will be immobile for a second due to a rough landing, this can be dangerous around enemies. This is greatly emphasized while in power armor.

Pros: [+4/5 Agility] [+40/50 AP] [-45%/-65% fall speed] [-90%/-95% fall damage].

Cons: [-4/-1 Strength] [+20%/+6.25% limb damage].

**DO NOT USE THIS MUTATION AND THIS SECTION NEEDS UPDATING.**

**Carnivore:** I cannot give help or advice on this mutation as this is not one that I personally use. WILL UPDATE.

This is one of only 2 mutations that cannot be used at the same time as the other counterpart **Herbivore**. With this mutation, you can ONLY eat meat and receive twice the effect of any meat, be that hunger or stat boost. Carnivore is heavily focused around strength, health and melee builds.

This mutation is a viable choice if you are building into its area of specifics, otherwise its use case is diminished by its easier-to-sustain counterpart.

Pros: Better meat effects.

Cons: Cannot eat any vegetables.

**I do not use this mutation.** That is not to say this mutation is bad or should not be used, it simply gives no buffs to my daily gameplay so I do not opt for its usage.

### **Chameleon: Invisible while unarmored and stationary**

This mutation is not useless but highly impractical to my playstyle. Being unarmored is a severe hindrance to my stats and carry weight. This mutation **CAN BE USED WITH ARMOR** if your armor has the **weightless 1\* legendary stat**. I much prefer other legendary effects on my armor so this is not useful for me.

I want to be visible when I am naked peeping into other players camps through their windows.

Pros: Invisibility in combat if unarmored and standing still

Cons: Must be unarmored.

Strange In Numbers & Class Freak modifiers unapplied.

### **VATS ONLY PLAYERS.**

#### **Eagle Eyes: Critical DMG + Perception**

Critical DMG is only applied in VATS when the crit meter is filled and used.

Crit DMG is part of the VATS system and perception affects V.A.T.S. accuracy and **compass range**. I play a VATS build so this is one of the most important mutations for me. However "useless" this may seem to a non-VATS player, you are still likely to sometimes use VATS. Having the additional accuracy and DMG (if you use that crit buildup) is always important for the few times you might use it. Additionally, there may be some Perception dialogue choices and this will help you cross that threshold for more options.

Who doesn't love better accuracy?!

This one mutation you could probably go without using. The majority of players I come across do not use vats and don't know about the crit mechanic. If you are NEVER using vats not even rarely, this mutation may see no benefit for you. The only benefits you would receive is a slightly farther compass detection range and dialogue options. You would be losing 1 STR = 5 carry weight for benefits you may never take advantage of.

Pros: [+50%/+75%] CRIT DMG [+4/+5] Perception.

Cons: -4/-1 Strength.

### **Egg Head:** HUGE XP buff.

Egg Head is an extremely simple buff, It just gives Intelligence. In this game, Intelligence modifies the amount of XP you gain per instance.

Who doesn't love free XP?!

1 Intelligence = +3% XP.

Egg Head = +18% XP.

Egg Head + Strange In Numbers = +24% XP.

Pros: +6/+8 Intelligence.

Cons: -3/-0.75 Strength and Endurance.

### **Electrically Charged:** Chance to shock melee attackers when hit.

If an enemy melees you they have a (unknown, maybe 5-10)% Chance to receive electrical shock damage. When this procs (processes, happens, goes off) you as well will also receive some damage. A negligible amount to you but some to them.

Who doesn't love free damage?!

Pros: Chance to shock melee attackers upon being hit.

Cons: Shock deals energy damage to the player.

Strange In Numbers & Class Freak modifiers unknown.

**Empath:** The Player receives more Damage while their team members receive less Damage.

Best in full health armored/PA builds.

The player will receive 6%/8% more damage which is nothing life-threatening, a very minimal amount. I am well fortified in my build so I can take extra DMG even with low health. Giving my team more DMG reduction is just another way I can help. This damage increase is apparent in low-health builds but again, if you are playing a low-health build you should be able to stay on top of your health control. So even at a disadvantage, this mutation is still a great choice as I care about helping my team more than anything.

Who doesn't love to help keep their friends alive?!

Pros: Team members receive -33% damage.

Cons: Player receives [+6%/+8%] damage.

**I DO NOT USE THIS MUTATION.**

**Grounded:** MASSIVE Energy Resistance

Best if you do not use energy weapons

Grants you an immense amount of energy resistance whilst also reducing your energy damage by an unusable amount. I love to use energy weapons, If I used **Grounded**, I wouldn't be able to kill a radroach.

Pros: +100 Energy Resistance

Cons: -50% Energy weapon damage

Strange In Numbers & Class Freak modifiers unknown.

**Healing Factor:** Automatic out-of-combat healing = Anytime you are not in combat you will receive a passive healing of a significant amount.

Paired best in a full-health build because the lowered healing efficiency becomes apparent in low-health builds.

ANY TIME I take fall damage, (I love to fly around and free fall), I will begin healing without Stimpaks. If I get into a small fight with a few enemies and take 1 hit, once I kill the threats and leave combat, I auto-heal without using resources. This removes the need to micro-manage health and heal 5 health with 1 stimpak. The biggest problem with this mutation is I end up carrying around 100-300 stimpacks because I loot so many and use so little.

Who doesn't love free healing?!

This mutation can have greater drawbacks than benefits even with the correct perk cards. The reduced chem effects can hinder chem users too much for them to find the benefits of automatic healing. If you are a junky or someone who uses any sort of chem regularly, this mutation will reduce your chem buffs by a disagreeable amount. It is advised to pick this mutation first before all others and monitor your chem buff rates. Then decide whether this is worth keeping or losing this mutation before acquiring all other desirable mutations

Pros: Automatic health regeneration +300%

Cons: Chem effects -55%/-14%

Strange In Numbers modifiers unapplied.

## THIS IS THE MOST GAME CHANGING MUTATION.

**Herbivore:** You cannot eat meat and only receive positive effects and hunger-filling properties from vegetarian foods.

There are 2 food/drink items in the game that increase your potential and effectiveness by the largest comparable margin. **COMPANY TEA & CRANBERRY RELISH.** There are meat alternatives but they require much more work to stabilize the same effect & buff. Herbivore is just easier to maintain. Company tea can be acquired from Company Tea Machine which can be bought for ATOMS if in the shop or GOLD BULLION from the special vendor. Compared to **Carnivore** this removes half the effort of farming as it can be placed at your camp. Cranberry Relish can be crafted after farming resources which are extremely easy to acquire.

Company Tea = +10%/+20% AP regen (Action Points, Stamina)

Cranberry Relish = +10%/+20% XP

For me, I will not play the game without Company Tea because I am a VATS build using HEAVY AMOUNT of AP all the time and my jet pack. The +20% regen has game-changing effects. Company Te and Cranberry Relish both last 1 hour so it's extremely easy to maintain +20% AP regen &

+20% XP every hour. As soon as the buff icon disappears I eat and drink and they both recover around 40% hunger/thirst. This makes it very easy to maintain my hunger/thirst as I won't need to go home as often being these 2 restore so much.

Herbivore will require a thorough understanding and adjustment to your playstyle to compensate for the change in your character. As big as that sounds it's EXTREMELY easy to accomplish and maintain. You can plant crops at home and use [Green Thumb](#) Perception card to gain 2x yield when harvesting ANY crop. To upkeep your hunger/thirst, you can just eat raw crops for food and purified water. To make it even easier you can plant [Melons](#) and they recover both 20% Hunger and Thirst. Plant 3 Melons and harvest with Green Thumb, that's 6 Melons. That will generally always fill your hunger/thirst

Aside from Company tea which can be difficult to acquire if you don't have the gold or atoms and Cranberry Relish which takes more effort to farm. You can opt for lesser work and lesser effects.

Corn Soup = +3%/+6% AP Regen

Cranberry Cobbler = +5%/+10% XP

Pros: Fruits, herbs and vegetables provide double the benefits and no diseases

Cons: Meat provides no benefit

Strange In Numbers modifiers increase food/drink benefits from 2x to 2.5x.

**Herd Mentality:** More stats when in a group WITH OR WITHOUT OTHER MEMBERS.

You should **ALWAYS** be in a [Casual Public Team](#) for the [additional 1-4 INT](#) that being [+3/+12% XP](#). Being in A GROUP private or public and with or without other members will STILL grant you the additional stats.

Who doesn't love free stats?!

Pros: +2/+3 Special stats when in a team.

Cons: -2 Special stats when NOT in a team.

**Marsupial:** Grants +20/+25 carry weight and 3x jump height. Inarguably the greatest exploration/adventuring buff in the game. -- This will allow access to nearly any place you can set your eyes on and if combined with a jetpack, there's no place you cannot go unless there is an invisible wall.

Who doesn't love exploring?!

Pros: +20/+25 carry weight +3x (Im guessing) jump height

Cons: -4/-1 Intelligence

\*\*\***Plague Walker:** I do not use this mutation. This mutation requires you to have diseases that can greatly hamper character performance and last anywhere from 15 minutes to 1 hour. This mutation will add a poison-like aura cloud around your character and damage anything near you. The "area" around you is incredibly small and only affects very close melee attackers. The negative effects of diseases and lacking effects of Plague walker do not compensate for a useful mutation.

Pros: Poison aura scaling with the number of diseases

Cons: Requires diseases.

**Scaly Skin:** Huge armor buff. -- This is another extremely simple buff much like **Egg Head**. It just adds Protection. You lose a negligible amount of ap, 12. This is nothing compared to the additional armor gained. If using Herbivore + Company Tea, your AP regen will be so high, AP loss won't matter.

Who doesn't love staying alive?!

Pros: +50 Damage & Energy resistance

Cons: -50/-12 AP

Strange In Numbers modifiers unapplied.

**Speed Demon:** Max move speed. -- This is the only Mutation in my 13 lineup that has an unavoidable negative effect. You WILL receive +50% Hunger/Thirst loss while moving. This can be easily solved with **Herbivore** Crops/Water at home and even easier with Melons.

You can only receive an additional +20% move speed and this mutation saves the use of many cards and other bonuses to be swapped for other usefull effects.

Who doesn't love the zoomies?!

Pros: +20% move speed +30% reload speed

Cons: Increased Hunger and Thirst decay by 50% while moving.

Strange In Numbers & Class Freak modifiers unapplied.

**Talons:** I do not use this mutation. I don't think this is a particularly bad mutation. I just never use unarmed attack so I don't want -1 Agility. However, -1 Agility is not a severe loss, and Power fist counts as unarmed attacks so I may add this to my list.

Pros: Unarmed attacks deal 25% more damage and cause bleeding

Cons: -4/-1 Agility

Strange In Numbers modifiers unknown.

**I DO NOT USE THIS MUTATION.**

**Twisted Muscles:** – This mutation is specifically for melee builds and I use guns so this is a hard negative for me.

Pros: +25%/+35% melee, unarmed, bashing damage +20% chance to cripple limbs.

Cons: -50% gun accuracy

Class Freak modifiers unapplied

**Unstable Isotope:** Same as **Electrically Charged** -- Additional Damage to yourself and melee attackers. Who doesn't love free damage?!

Pros: 10% chance to release a radiation blast when struck in melee.

Cons: The radiation blast irradiates the player

Strange In Numbers & Class Freak modifiers unknown.

### WITH STRANGE IN NUMBERS 25% BUFF

Adrenal Reaction:	+MORE WEAPON DMG. AT LOW HP, MAX HP -12
Bird Bones:	STR -1 REDUCED FALL SPEED AGI +5
Eagle Eyes:	CRIT DMG +75% STR -1 PER +5
Egg Head:	STR -0.75 INT +8 END -0.75
Electrically Charged:	CHANCE TO SHOCK MELEE ATTACKERS
Empath:	+8% DMG. TAKEN, -33% TEAM DMG. TAKEN
Healing Factor:	HEALTH REGEN +300% CHEM EFFECTS -14%
Herbivore:	EAT VEGGIES BUT NOT MEAT WITH NO DISEASE & 3X BENEFITS
Herd Mentality:	-2 SPECIAL SOLO, +3 SPECIAL GROUPED
Marsupial:	+JUMP HEIGHT CARRY WEIGHT +25 INT -1
Scaly Skin:	ENERGY RESIST +62 AP -12 DMG RESIST +62
Speed Demon:	HUNGER/THIRST +50% WHILE MOVING +RELOAD SPEED MOVE SPEED +25
Unstable Isotope:	CHANCE TO IRRADIATE MELEE ATTACKERS

### WITHOUT STRANGE IN NUMBERS 25% BUFF

Adrenal Reaction:	+WEAPON DMG. AT LOW HP MAX HP -12
Bird Bones:	REDUCED FALL SPEED AGI +4 STR -1
Eagle Eyes:	CRIT DMG +50% PER +4 STR -1
Egg Head:	INT +6 STR -0.75 END -0.75
Electrically Charged:	CHANCE TO SHOCK MELEE ATTACKERS
Empath:	+6% DMG. TAKEN, -25% TEAM DMG. TAKEN
Healing Factor:	HEALTH REGEN +300% CHEM EFFECTS -14%
Herbivore:	EAT VEGGIES BUT NOT MEAT WITH NO DISEASE & 2X BENEFITS
Herd Mentality:	-2 SPECIAL SOLO, +2 SPECIAL GROUPED
Marsupial:	CARRY WEIGHT +20 +JUMP HEIGHT INT -1
Scaly Skin:	DMG RESIST +50 ENERGY RESIST +50 AP -12
Speed Demon:	HUNGER/THIRST +50% WHILE MOVING +RELOAD SPEED MOVE SPEED +20
Unstable Isotope:	CHANCE TO IRRADIATE MELEE ATTACKERS

Thank you for finishing this monolith of a read. I put a lot of effort into organizing all of this information and hope this helps clear up some misunderstandings and helps you stay alive in the Wasteland!

I spend all of my available time teaching players the unexplained mechanics of the game and got tired of repeating myself to every new friend I made. So I decided to put everything down into 1 Doc and spread it around. This was originally a giant note sheet for my friends but as I put more work into I decided to try and course it into a master key for mutations.

Please reach out to me on Reddit at [u/xghoststrike](#) if you have any questions or information you would like to add/share with me to update this.