

WISDOM FROM THE WASTELANDS

Issue #38:
Radiation Sickness



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Radiation. For many in a post-apocalyptic world, the word conjures burning thoughts of flesh-corrupting terror; for others, the tingling aura of mutation-granting nirvana. In the core *Mutant Future* rules this damage/mutation mechanic is cut and dried: you get crispy and a roll to save — fail enough times you get dead or sprout something. This first installment of a two-part series makes things a little ... messier, by covering radiation sickness. Just the thing for those Mutant Lords who feel they've been coddling their mutants. For more atomic goodness, the second issue introduces new types of radiation and alternate rules regarding its use (i.e., damage and havoc).

In real life, large doses of radiation inflict severe trauma, killing victims outright or causing terrible side effects and a lingering death. Adding just a touch of realism to this hazard should make players reconsider frolicking in the glowing fields, hoping to get mutations. The mechanics can be very deadly and should be used sparingly, or where players might abuse the rules to gain excessive powers and abilities. As they are optional rules, choose those best suited to the tone of your game.

Outlined in the **Radiation Poisoning Table**, these new mechanics are based around two ideas. First, no radiation encounter is created equal: a class 10 field is much more intense and damaging than a class 1 field. Second, the harm caused stays with a character long after she leaves the irradiated area.

The table's first column is **Accumulated Radiation Classes**. This tracks a character's radiation exposure, like a hit point tally in reverse. For every radiation attack suffered or each round spent within an intense field of background radiation, the character adds the radiation class to her total. This number increases with further exposures and decreases with time or treatment, as the radiation damage is purged or healed.

As the character's exposure builds, she gets sicker. The table describes six increasingly severe **Stages**, ranging from Mild to Death. Most involve some kind of **Statistic Reduction**, damage to CON, DEX, and/or STR. These penalties stack



up as a character moves to more severe stages (e.g., a -1 CON from one stage and a -2 CON from the next become -3 CON). Unless a victim enters the Critical stage, early stat losses are not permanent (see **Recovery**). However, if any statistic drops below zero, the victim dies.

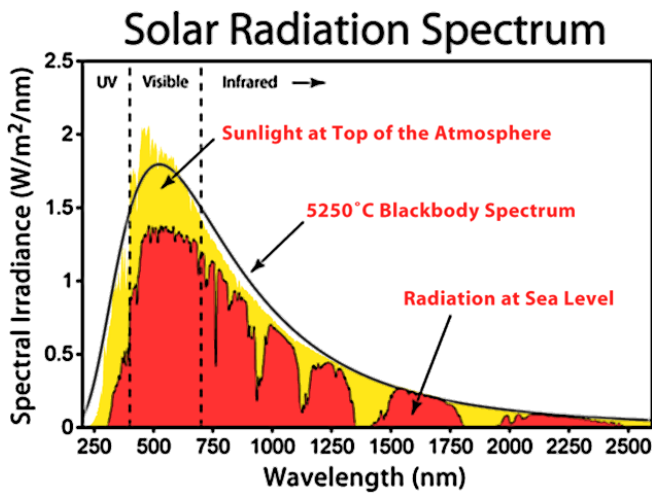
Every stage includes secondary **Symptoms** (ranging from hair loss to death), detailed after the table. As with stat reductions, all penalties from each symptom also stack, so victims can be seriously disabled by intense, repeated, or prolonged exposure.

The **Time to Onset** column indicates the interval until symptoms and stat reductions appear. This does not affect hit point damage, unchanged from the original *MF* radiation rules: this takes effect immediately, and characters still get a save versus radiation for half damage.

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This publication is dedicated to providing useful information, game content, and ideas to players of modern, science fiction, and post-apocalyptic table-top and role-playing games in general and to fans of Goblinoid Games' *Mutant Future* RPG in particular. The material contained herein are compatible with it and any others that use the "Basic" system introduced in the most popular role-playing games of the early 1970s and are easily adaptable to many other games (especially successor systems, to include those covered by the Open Game License).



There are two symptoms significant enough to merit their own columns: **Cancer** and **Mutation**. When a character moves into a more severe stage of radiation poisoning, she must make two percentile checks; rolling under the number(s) listed means the character was changed on a genetic level, developing *cancer* and/or gaining a new, randomly determined *mutation*.

RECOVERY

For those lucky wastelanders with access, radiation sickness can be quickly reversed or prevented using medical technology. Different items and treatment methods can be found in the *Mutant Future* core rulebook or the issues of *Wisdom from the Wastelands* covering medical devices (#13), nanotechnology (#28, 30, 31), and drugs (#33).

Unfortunately, for most the only cures are time and the body itself. Organs and systems respond differently to radiation exposure, recovering at different rates. Healing hit point damage remains unchanged: these return at the character's normal rate.

Without any treatment, a character's body can also purge a number of radiation classes equal to her normal healing rate. For example, a character with a healing rate of 3 accumulates 23 radiation classes, putting her in the Minor stage. Unless exposed to more radiation, she will be radiation free in eight days. When she drops to 10 classes, her stage

moves from Minor to Mild.

As the character gradually drops to a less severe stage, most symptoms associated with the more acute stage go away immediately. However, the healing processes for the more serious conditions — *aplastic anemia*, *cancer*, and *mutation* — are described in the individual entries. And despite changing stages while getting better, the recovering victim does not make *mutation* or *cancer* checks.

Statistic reductions heal in a gateway process. First, a radiation patient must drop to a less severe stage; then, any stat losses associated with this stage can begin to recover at the character's normal healing rate. The stat reductions do not automatically disappear when dropping a stage, nor do they healing continually.

This has likely been a lot to digest in a short time. Here's an example to put everything together. While exploring a ruined garage, a healthy character, Min, gets bathed in low-level background radiation (class 2, with one radiation save per day). Consulting the **Radiation Poisoning Table**, this puts her in the Mild range; aside from the hit point loss (and save for half damage), it is like getting a strong sunburn. Without access to mutations or appropriate medical technology, in 4d6 hours Min will feel Lightly *fatigued* and small *pustules* might erupt on her skin. There is also a 5% chance she develops *cancer*, and a 1% chance of her gaining a *mutation*.

Later, Min crawls through liquid leaking from an atomic car battery (class 7). She is up to 9 classes, but still in the Mild range, so she does not make another set of *cancer* and *mutation* checks, and there is no change in her condition. Other than taking more damage.

Unfortunately, on her way home, Min gets blasted by a radioactive rat-nasty (class 4). She has been exposed to 11 classes of radiation. Besides suffering more immediate hit point damage, Min moves into the Minor stage. Within 2d6 hours the additional harm becomes evident: Min's *fatigue* and *pustules* manifest more rapidly; she loses 1 point of CON; she might become *nauseated* and get a Slight case of *diarrhea*; and, she has to make *cancer* and *mutation* checks, but at 10% and 5%, respectively.

Min has a natural healing rate of 3, so after resting a day her accumulated radiation classes is reduced to 8, moving

Radiation Poisoning Table

Accumulated Radiation Classes	Stage	Time to Onset	Statistic Reduction	Symptoms	Cancer	Mutation
01-10	Mild	4d6 hours	None	<i>Fatigue</i> , possible <i>lesions</i> and/or <i>scarring</i>	5%	1%
11-25	Minor	2d6 hours	-1 Con	Add <i>nausea</i> , <i>diarrhea</i>	10%	5%
26-50	Major	1d6 hours	-2 Con, -1 Dex	Add <i>aplastic anemia</i> , <i>hair loss</i> , <i>pain</i> , <i>migraines</i>	20%	10%
51-75	Advanced	4d6 minutes	-3 Con, -2 Dex, -1 Str	<i>Scarring</i> and <i>lesions</i> certain	50%	15%
76-100	Critical	1d4 minutes	-3 Con, -3 Dex, -2 Str	Add <i>tissue damage</i> , possible <i>permanent statistic loss</i>	75%	25%
101+	Death	1d6 rounds	N/A	N/A	N/A	N/A

her back down to the Mild stage. When this happens, Min's lost CON point returns and her *nausea* and *diarrhea* clear up, but she still feels *fatigued* and suffers from *pustules*. Three days later, with the radiation classes reduced to 0, Min is her old self again, unless she were unlucky enough to develop cancer or get a defect mutation during her earlier exposure.

SYMPTOMS

Aplastic Anemia: Significant radiation exposure (Major, Advanced, and Critical stages) damages a character's bone marrow, interfering with blood cell production. This lowers his white blood cell count, making the character more susceptible to disease and infection. Whenever his condition gets worse and he moves into one of these three stages, the character must save versus poison.

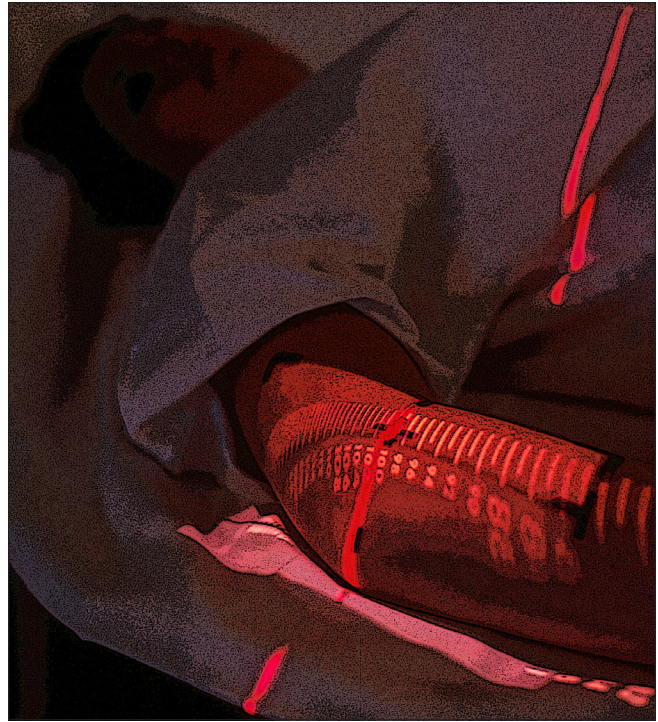
If he saves, the character is unaffected, and remains so unless more radiation exposure moves him into a more severe stage, when he must make another poison check. Failure means his immune system shuts down and he incurs a penalty to *every* saving throw against disease and poison until *all* accumulated radiation classes are completely purged from his body. In addition, damage from disease and poison is increased by a certain number of points per die, depending on the stage.

For example, Turok progresses from Minor to Major stage and fails his initial poison check. He now has a -2 penalty to any future disease or poison saves. When he suffers a class 5 poison bite, this does 5d6+5 damage, not 5d6. If he then gets enough radiation exposure to move him to Advanced, or he failed his poison save at the Advanced stage, the penalty becomes -3 and the damage from the same bite is 5d6+10.

Aplastic Anemia Table

Stage	Save Modifier	Additional Damage
Major	-2	+1 per die
Advanced	-3	+2 per die
Critical	-4	+3 per die

Cancer: This horrible, often fatal disease emerges when radiation damages a character's genetic code and triggers uncontrolled cellular growth (Save Modifier -5, Infection Duration 1 week, Affected Stats STR -1d4, CON -1d6, DEX -1d4, Damage Per Day 1d12). A cancer victim experiences localized abnormal cell growth, which sorely taxes her body and causes exhausting, unpleasant, and painful side effects. Although there are exceptions, most cancers cannot be beaten by the body's immune system and will likely kill a character who does not get medical help. Treatments include surgery, nanotechnology, chemotherapy, or other types of drugs.



Unfortunately, in places without advanced procedures and medicines, cures can be nearly as painful, and possibly as deadly, as the disease itself. Untreated victims deteriorate rapidly, losing the effects listed above every week. If an affected creature's hit points or any attribute reaches zero during this time, the creature dies.

Symptoms: Weakness, weight loss, fatigue, pain (see *WftW* #8 for more information on using these conditions).

Diarrhea: Radiation damage to a victim's stomach and intestinal tract often causes diarrhea. This is inconvenient at best, life-threatening at worst. Due to the mental and physical discomfort, a victim suffers a -2 to hit penalty, and a 2-point AC penalty. Each round the victim engages in strenuous activity such as combat, running, etc. he must also save versus poison, with a modifier based on the *Diarrhea Severity*. Failure means the victim has 1d2 rounds to relieve himself before he has an accident, which inflicts a 3-point reaction penalty and a -6 Charisma penalty until he can clean up.

Diarrhea is extremely dehydrating, so a victim must drink a certain amount of extra fluid every hour depending on the Severity or suffer the CON damage listed in the table. If his CON ever drops below zero, he dies. Once the diarrhea passes and the victim continues to drink at least one extra quart of fluid per day, the character's CON damage returns at his normal daily healing rate.

Diarrhea Table

Stage	Diarrhea Severity	Saving Throw Modifier	Additional Fluid Requirement	CON Damage
Minor, Major	Slight	-1	1 quart/hour	1d2
Advanced	Moderate	-3	2 quarts/hour	1d3+1
Critical	Severe	-5	4 quarts/hour	2d3+1

Fatigue: Radiation poisoning leaves a victim tired. This can be mild or completely debilitating depending on the level of exposure, and will persist until the radiation sickness comes to an end (one way or another). Please note: this issue contains the reprinted *fatigue* rules from *WfW* issue #8, which have been slightly modified to reflect the new mechanics.

Hair Loss: Radiation damages fast growing cells like hair follicles; with enough exposure a character might lose his hair. Each time the victim enters a stage of radiation poisoning with *hair loss* as a potential symptom (Major and worse), the victim must save versus poison or his hair begins to fall out. For most, this is mainly a cosmetic issue as they lose 1d2 CHA points. However, it can be much more debilitating to characters with hair-based mutations (a mutant porcupine loses its quills), or embarrassing to furred mutants (a mutant bear goes bare) because hair is lost over the entire body. The ML should rule whether a character with a hair-based mutation loses part or all benefits (or drawbacks) due to the hair loss. Both this effect and the CHA loss could be permanent if the ML decides, or just in effect until the hair grows back. Humans regrow 1/2" of hair length per month; mutant and mutant animal hair/fur might return more rapidly.

Lesions/Pustules: These pus-filled blisters cause social discomfort and physical hardship, possibly forming when the victim loses more than 25% of his total hit points in a single radiation exposure. The victim must immediately save versus death, or lose 1d4 CHA points as his skin swells in red, bumpy patches.

Those with *lesions* or *pustules* face additional difficulties during combat. Any violent contact inflicting physical damage (e.g., from melee, ranged, or energy weapons) may rupture blisters. This chance is equal to how much of the victim's body is covered by swelling, an amount based on the stage of radiation poisoning (see the **Lesions or Pustules Table**). For example, a victim with Mild radiation poisoning has pustules over 10% of his body, and every hit in combat has a 10% chance of striking a blister. If the ML rolls under this percentage, the victim suffers an additional 1d3 points of damage. Due to the discomfort, a victim wearing armor suffers a 2-point AC penalty. Every hour he wears armor, the victim must also save versus poison or take 2d3 damage from the *lesions* being ripped open. However, he might get a saving throw modifier based on the lesion severity to avoid this. (See the table below for the modifier.)

Note: If the ML is feeling especially evil, these open wounds might make a PC more susceptible to disease.

Fatigue Table

Stage	Fatigue Level	Modifiers
Mild, Minor	Light	-1 to hit, -25% movement
Major, Advanced	Moderate	-2 to hit, -50% movement
Critical	Heavy	-3 to hit; -75% movement; save versus stun every round of combat or strenuous activity, or fall unconscious

Migraine Table

Stage	Migraine	SeverityModifiers
Major	Slight	-1 to INT and WIL, -25% movement, -1 to hit, +1 to AC, -10% to figure out/repair artifacts
Advanced	Moderate	-2 to INT and WIL, -50% movement, -2 to hit, +2 to AC, -20% to figure out/repair artifacts
Critical	Extreme	-3 to INT and WIL, -75% movement, -3 to hit, +3 to AC, -30% to figure out/repair artifacts

Pain Table

Stage	Pain Level	Effects
Major	Slight	-1 to hit, +1 to AC, -5% to figuring out and repairing artifacts
Advanced	Moderate	-2 to hit, +2 to AC, movement reduced by 25%, -15% to figuring out and repairing artifacts
Critical	Extreme	-3 to hit, +3 to AC, movement reduced by 50%, -25% to figuring out and repairing artifacts

Lesions/Pustules Table

Stage	Percent of Body Covered	Saving Throw Modifier
Mild	10%	+3
Minor	25%	+1
Major	50%	+/-0
Advanced	75%	-2
Critical	100%	-4

Migraines: Terrible headaches often characterized by nausea, dizziness, and noise/light sensitivity, migraines can range from Slight to Extreme. In Extreme cases, the victim must save versus stun during every round of combat or every turn of strenuous activity, or fall unconscious for 1d6 minutes.

Nausea: Needing to vomit makes a character less physically and mentally adept. Her movement rate is reduced by 50% and she suffers a 2-point penalty to any saving throws. The character can still engage in physical combat, but is -4 to hit and loses any DEX-based AC bonus. In addition, her DEX score is reduced by 4. In mental combat, the mutant attacks under a 4-point Willpower penalty, and she cannot maintain any mental mutation requiring concentration until the nausea passes.

Pain: Anything from chronic joint aches to a full-body burn can reduce a character's ability to function. Those suffering Extreme *pain* must also save versus stun during every round of combat or every turn of strenuous activity, or fall unconscious for 1d6 minutes.

Scarring: Radiation exposure often causes serious tissue damage and scarring. Whenever a character loses more than 50% of his total hit points in a single radiation event, he must save versus death or permanently lose 1d3 points of CHA. However, once the victim reaches the Critical stage there is no save: scarring is automatic.

If the ML wishes, this can also lead to a permanent modifier (positive or negative) to reaction, depending on the group or person encountered. Some tribes or individuals that revere warriors could see radiation scars as a sign of strength, while those that worship the Glow might see the wounds as a blessing or evidence of piety.

Permanent Statistic Loss: At this stage the victim has suffered massive trauma to every system in her body. She must now make one saving throw versus death for *every* point of statistic loss caused by radiation poisoning. For example, at the Critical stage, the character would have lost at least 9 points of CON, 6 DEX, and 3 STR, so she must make a minimum of 18 saves.

If a saving throw fails, that stat point is permanently damaged and will not return without technological aid. For those stats that saved, and can be recovered, they return as described in the **Recovery** section, healing by stage at the normal rate as the radiation is purged.

Tissue Damage: When exposed to enough radiation, the victim's sweat glands can be damaged, making him vulnerable to overheating. During every round of strenuous active (e.g., in combat or doing heavy labor), the victim must save versus energy or suffer 1d3 points of damage. He can avoid this by cooling his body with technology or a mutation.

The victim also takes an addition point of damage per die when subjected to thermal attacks. For example, a heat ray that normally causes 3d6 damage will inflict 3d6+3



damage against a victim with tissue damage. This condition is permanent, unless the victim has access to advanced technology able to reverse it (e.g., the appropriate nanites).

Vertigo: Those with vertigo have difficulty even standing or concentrating. Victims may only safely move at 25% of their regular movement rate; those trying to move faster will move in a direction randomly determined by the ML. Every round a dizzy character tries to move her full movement rate, she must save versus stun or fall prone.

While dizzy, the victim cannot climb, suffers a -4 to attack rolls, and gains no Dexterity bonus to AC. Characters using mental attacks have a -4 Willpower penalty for both attack and defense. If a victim has the ability to fly, she cannot do so while suffering from vertigo. This condition clears up when the victim's radiation sickness passes.

Optional Rule: Other Means of Gaining Mutations

If you use the *Mutant Future* radiation mechanics, a character receives a new mutation after failing 5 saving throws versus radiation in one day. If you prefer to use a method other than chance, her are two alternative routes to mutation.

1) Characters or creatures mutate after simply being exposed to 25 total radiation classes, regardless of whether they save versus radiation or not.

2) Character could fail saves against 25 total classes of radiation.

Because these options are based on accumulating classes, rather than failing saves, the number of exposures needed to gain a mutation can vary widely. For example, using method #2, a character is exposed to class 10, 10, and 7 in short order, and fails checks against all three. This puts him over the 25 class limit, but with only three failed saves. On the other extreme, the character could fail against class 1 radiation 25 times before mutating.

The 25-class limit assumes the average radiation class encountered is 5, so approximately five exposures are still required for a character to mutate. However, the ML can adjust this number to suit her purposes. For example, if she feels this total is too low, the ML may decide a character will only mutate after being exposed to 50 classes of radiation, or fail 50 classes worth of saves.

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First Electronic Publication:
March 2014; SKP E 1408.