
PHOENIX COMMAND FATIGUE RULES

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The intention of these rules is to simulate the effects of various types of physical fatigue in the **Phoenix Command Combat System**. Most of these rules have been playtested and found useful in role-playing simulation. Some of them are just ideas.

1.1

THE BASICS

Bodily fatigue is measured in **Fatigue Points (FP)**, which come in several forms, depending on how they were gained. Each type is recovered from in a different way, as discussed in the appropriate sections. A character with his full energy reserves will have **zero FP**.

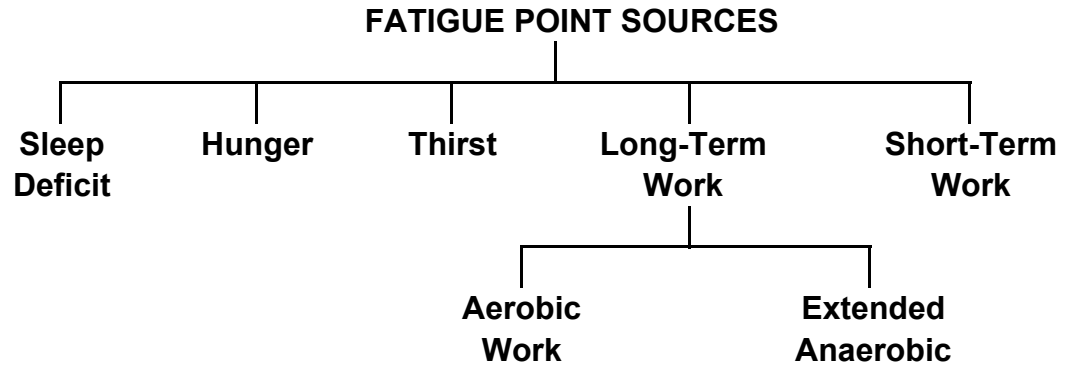
A character's **Analeptic Value (AV)** measures how quickly he recovers from exertion. It equals the character's **Health (HLT) characteristic times his Motivation (MOT) characteristic times 0.5**, rounding off.

$$AV = HLT \times MOT \times .5$$

Example: Steeltoes has a Health characteristic of 17, and a Motivation of 6, thus, his Analeptic Value is: 17 times 6 times 0.5, for a total of 51.

Player-characters should record the following categories on a blank character sheet: **Sleep Deficit, Long Term, Hunger, Thirst, Short Term, Limb Fatigue**. These terms are described later in these rules.

In the figure below, you can see the various types of physical exertion that are dealt with in this rules system.



"I can take anything... except pain."

Private Roy

How much Fatigue reduces a character's effectiveness is found by entering the adjusted sum of his current Fatigue Points from all sources, on the **Fatigue Effects Table**, below. To surpass any given threshold for further exertion, a character must make a roll against his **WIL** characteristic adjusted as shown on the table. If the character's life is in danger, add **4** to his WIL for this purpose. If the roll is failed, the character may not exert himself further until he reduces his FP total somehow.

FATIGUE EFFECTS TABLE				
Total FP	Fatigue Effects			WIL Roll to Continue
11	-1 CA	-1 SA	-1 to all 3(6) rolls	WIL + 3
15	-2 CA	-1 SA	-1 to all 3(6) rolls	WIL + 2
19	-3 CA	-1 SA	-1 to all 3(6) rolls	WIL + 1
23	-4 CA	-1 SA	-1 to all 3(6) rolls	WIL
27	-5 C1	-1 SA	-1 to all 3(6) rolls	WIL - 1
31	-6 CA	-1 SA	-1 to all 3(6) rolls	WIL - 2
32	-7 CA	-1 SA	-1 to all 3(6) rolls	WIL - 3
33	-8 CA	-1 SA	-1 to all 3(6) rolls	WIL - 4
34			etc.	etc.

1.2

SLEEP DEFICIT

An average human requires eight hours of rest per day. Thus, sixteen hours after the character awakens, if he doesn't rest he starts gaining **Sleep Deficit FP** at a rate of **1 FP per hour**.

Under perfectly comfortable conditions, a person can sleep well over 8 hours a day, but when trying to get rested in deficient circumstances, the following table gives guidelines to how various conditions should affect

one's maximum rest time, which is **8** hours under less than ideal conditions. Subtract any applicable conditions, as seen in the table, from eight hours to find the maximum rest time. After that point, the character gains no value from the rest, and may only begin resting again after **(6) minus his current Fatigue CA penalty** (from the **Fatigue Effects Table**, above) in hours of activity (the minimum being **1** hour).

Notice, also, that at the GM's discretion, a WIL roll may be warranted if a character tries to sleep through excessive noise or discomfort (this roll may also be modified with a skill such as Survival, or perhaps Meditation, as seen proper by the GM).

"Sleep loss is death."

Mr. Sandman

<u>Rest Condition</u>	<u>Modifier</u>
Not prone or in relaxed position	-1 hour
Lying on bare ground, no padding	-1 hour
Excessive cold, dry (clothes)	-1 hour
Excessive cold, wet (clothes)	-3 hours
Lying on concrete, no padding	-2 hours
Excessive heat	-2 hours
Wind 10 HPP+, no shelter	-2 hours
Precipitation, no shelter	-3 hours

Recovering Sleep Deficit FP: Sleep Deficit is reduced by 1 FP per hour of rest beyond eight, per twenty-four hours.

1.3

HUNGER

We, humans, have a natural need to nourish our body with food, just as we have to sleep. If a character doesn't get the nutrient energy his body requires, he starts getting fatigued by it.

Enter the sum of the character's **Strength** and **Health** characteristics below to find his **Hunger Tolerance**. If he isn't drinking water, a character's Hunger Tolerance may not exceed his **Thirst Tolerance** (see **Section 1.4**). If a character hasn't eaten in twenty-four hours, he gets a general non-combat modifier of **-1** to all 3(6) rolls. Overweight characters increase their Hunger Tolerance by **2 days per 1 CA** their weight robs them.

STR + HLT	Hunger Tolerance
15 or less	4 days
16 - 19	5 days
20 - 24	6 days
25 - 30	7 days
31 - 35	8 days
36+	9 days

Within the limits of his Hunger Tolerance, each day a character fails to eat he gains **1 FP**.

Outside his Hunger Tolerance limits, each day a character fails to eat he gains **2 FP**, and loses **(3)** each from **STR** and **HLT**.

When a character's STR drops to 0 due to hunger or dehydration, he doesn't have any strength left to move even a finger anymore. When his HLT drops to 0, he dies.

Recovering From Hunger: By ingesting nourishment, a character regains **1 HLT** and **1 STR** per day, and loses **1 FP** per restful meal (maximum **3** per day). One quarter of the characteristic losses last for a full year, until which all of the lost characteristic points are restored to their initial levels.

1.4

THIRST

The human's need for fluids is even more essential than his need for nutrients. One dies a lot faster from dehydration, than he does from hunger.

A character's **Thirst Tolerance** equals **3** plus any relevant modifiers from the table below, for a minimum of **1** day.

"I'm tired of listening to your blathering you old fool !"

Nathaniel

<u>Condition</u>	<u>Modifier</u>
Food with high water content e.g. raw meat, raw greens, vegetables, but not dried or cooked meat, tree bark, or bread	+2
Character weight > 200 lbs	+1
Female	+1
Only Sedentary work performed	+1
Excessive heat	-1
Didn't eat that day	-1
Either STR or HLT < 8	-1

Within the limits of his Thirst Tolerance, each day a character fails to drink he gains **4 FP**.

Outside the limits of his Thirst Tolerance, each day a character fails to drink he gains **8 FP**, and loses **2 STR** and **2 HLT**.

When a character's STR drops to 0 due to hunger or dehydration, he doesn't have any strength left to move even a finger anymore. When his HLT drops to 0, he dies.

Recovering From Thirst: By imbibing water, a character regains **2 STR** and **2 HLT** per day, and loses **3 FP**. One quarter of the characteristic losses last for a full month, after which all of the lost characteristic points are restored to their initial levels.

1.5

LONG-TERM FATIGUE

Long-Term Fatigue is the kind of exhaustion that is gained by long-term work and physical exertion. **Long-Term FP** is accumulated per hour. Find the exertion level on the table below, and then modify it by work conditions and the character's **Analeptic Value (AV)**, to find the Long-Term FP accumulated per hour.

The character is presumed to be working at a rate of no more than **one-quarter** of his current **Combat Actions** value. **STR Limit** indicates how much of a character's Strength-based weightlifting limit can be used (the **Strength Limits Table** can be found at the end of these rules).

"The evening came, and the work went on. And now the men were beyond weariness. Their faces were set and dead. They worked jerkily, like machines. When it was dark the women set lanterns in the car doors, and kept pots of coffee handy..."

John Steinbeck, *The Grapes of Wrath*

Work Type	Hourly FP	STR Limit
Sedentary e.g. driving, office, strolling	.5	1/4 of normal
Moderate e.g. foot travel, piling wood	1	1/2 of normal
Strenuous e.g. chop wood, use crutch with badly broken leg	2	full

Condition	Modifier	AV	Modifier
Excessive heat or cold	2.0	< 40	2.0
No water, normal day	1.5	40 - 89	1.0
No water, hot day	3.0	90 - 139	0.5
No extra water, hot day	1.5	140 +	0.3
Carrying Combat Load	2.0		
Exceeding Combat Load	3.0		
No short breaks allowed	2.0		

Special Situation	Effect
Mild Illness	Gain 2(6) FP, one time only, reducible only once the illness ends.

Recovering Long Term FP: Long-Term Fatigue is reduced by **1 FP** per hour of rest, which may be concurrent with sleep deficit reduction; by **1** per restful meal, maximum of four meals per day; and by the character's Health minus **10** per day (minimum **0**).

1.6

EXTENDED ANAEROBIC FATIGUE

Extended Anaerobic exertion is in lieu of ordinary **Long-Term Fatigue**, and comes when a character exerts himself as much as possible, paced with the minimum necessary rest, for many minutes or even hours. If there are no opportunities for even momentary rests, double the FP taken, and also track **Short-Term Fatigue** (see **Section 1.7**). *All other work conditions apply.*

Every hour of Extended Anaerobic exertion causes the character to gain **12 FP**. Prorate this to five-minute increments, rounding fractions up. During this time the character's average Combat Actions (CA) expenditure may not exceed one-half of his CA, and one-half of his Strength-based weightlifting limits.

Recovery of FP: See **Long-Term Fatigue**, above.

1.7

SHORT-TERM FATIGUE

Short-Term Fatigue represents exhausting activity with negligible breaks, such as sprinting, leaping, heavy weightlifting, and melee. It can also be gained from jarring bodily impacts such as gunshots and punches to the stomach. Remember to **always track Extended Anaerobic** also.

The conditional modifiers work the same way as with **Long-Term Fatigue**, but only the following work conditions can apply:

<u>Condition</u>	<u>Modifier</u>
Excessive heat or cold	2.0
Carrying Combat Load	2.0
Exceeding Combat Load	3.0

Apply the character's AV Mod below (the same one used for Long-Term Fatigue), to any Short-Term Fatigue a character gains due to the special situations, below.

AV	Modifier
< 40	2.0
40 - 89	1.0
90 - 139	0.5
140 +	0.3

The following table gives Short-Term FP values gained from various special situations. The abbreviations are standard to **Phoenix Command**; **ID** stands for Impact Damage, **DC** for Damage Class, **PD** for Physical Damage, and **SP** for Shock Points.

“I might have said ‘over my dead body’, but what I actually meant, was ‘over my prone body’.”

Will, the Lecherous

Special Situation	Short-Term FP Gained
Ram attack to body	ID / 10
Strike to body	ID / 10
Strike to abdomen	ID
Gunshot to body or head (non-glancing)	DC
Gunshot to abdomen (non-glancing)	DC x 2
Punctured Lung	30
Explosive Concussion	PD / 100
Fall, or thrown to ground	PD or SP / 100
Dive prone, Knockdown	2

Every Analeptic Value (AV) amount of Phases a character exerts himself, he gains **5 FP**.

Recovering Short Term FP: This depends on what specifically the character is doing to recover:

- For every **30 Phases** of total rest, as in the character has collapsed, he loses **AV / 10** worth of FP.
- For every **60 Phases** of Sedentary work, a character loses **AV / 10** worth of FP.
- For every **5 Minutes** of Moderate work, a character loses **AV / 10** worth of FP.

LIMB FATIGUE

“Someone, bring me a pillow, so that I won’t die from cracking my head on those rocks when my feet fail me.”

Major Abus, The Mountain Bandit

Limb Fatigue indicates the kind of exhaustion that is developed by straining or taxing a specific limb, like when using an arm to wield a sword, for instance.

Individual limb fatigue is measured in **Temp* Levels**, which stands for **Temporary Incapacitation Levels**. These Levels are accumulated for engaging in various strenuous activities listed below, for at least ½ or more of the listed number of repetitions or Phases that the character is capable of. If the actual repetition or Phase limit itself for a given activity is reached, the character’s pertinent limb(s) suffer **Incapacitation**, rolled on the **0 PD** line of the regular **Incapacitation Table** in **Phoenix Command Combat System**, with a **-2** modifier to the **0 - 9** die roll.

The maximum number of Temp* Levels a character can accumulate to any of his limbs, is **10**, at which Level the limb becomes properly **Disabled** as described in the **Phoenix Command Combat System**. This Disablement and all Temp* Levels the limb has suffered, have to be recovered normally, as the rules dictate.

Temp* Level Effects

Temp* Levels act like **Permanent Disabling Injuries** (see **Phoenix Command Advance Rules, Section 8.6**). That is, each Level increases the AC cost for actions performed by its arm by **+1 AC**, or the cost of movement for its leg by **50%**. Also, Temp* Levels increase a character’s chances of fumbling his weapon (see below).

For subsequent exercise, a character with any Temp* Levels in the limb(s) to be used, uses one row higher than normal when finding Repetition or Phase limits, but use new Temp* Level from the normal row. If this puts the character off the top of the table, that action is beyond his capabilities. This does not apply to archers satisfying their other requirements like STR+SL, etc.

Fatigue Due to Injuries

Excluding Surface Cuts, a limb which sustains any wound has a chance of suffering a **0 PD** line Incapacitation, with a **-2** modifier to the **0 - 9** die roll, equaling **(The Phase’s wounds’ PD / Disabling Threshold) X 100**.

$$\text{Temp* chance} = (\text{New PD} / \text{Threshold}) \times 100$$

Surface Cuts apply like normal wounds, but only if they are sustained *after* the limb’s **Disabling Injury Threshold** is exceeded by cumulative other wounds of any kind. **Whips** and other supersonic weapons’ chance instead equals the **PD taken X 10%**.

Whip Temp* chance = PD X 10

Each time a limb recovers from Temporary Incapacitation, it gains +1 Temp* Level.

Recovering From Limb Fatigue

A character's limbs' recover all at the same time. Temp* Levels for each specific limb dispel consecutively. Enter the character's total Temp* for the given limb on the table below, to find the recovery time for the levels, and the PD taken due to muscle strain. When using the table, Temp* Levels dissipate in order from the first to the next ones. So, for instance, a character who has three Temp* Levels one of his arms, will recover the first Level in 30 Phases (or 60 seconds), the second Level after the next 4 hours, and the third Level after the following 24 hours.

In case of accumulating further Temp* Levels to an already fatigued limb, for recovery purposes, the Levels pile up so that the newest one is always the fastest recovering one. If a character has already recovered from 2 Levels, for instance, and still has two more to go, and he then gains 1 more Level, the 2 that were left from the original fatigue are recovered in 24 hours per Level, but the new Level dissipates in just 2 minutes.

Temp* Level	Recovery Time	PD Taken
1st	60 Phases	0
2nd	4 hours + meal	0
3rd	24 hours each	1 each

Example: Conan the Barbarian has, during a wild escape from the sorcerers of the Black Circle, had to fight his way through a horde of some Vendhyan cutthroats, and has now finally found a resting place from an inn in a nearby town. Because of swinging his trusty broadsword and splitting heads with it for the whole night, Conan has developed a Temp*2 to his right arm, and because of ambidextrously switching hands at times, a Temp*1 to his left arm. After losing his horse to an arrow of the bandits, he had to run for many miles, also developing a Temp*4 to both of his feet.

Let's assume that all of his fatigue starts to recover at the same time. The first Levels from all of his Temp* Levels dissipate after the first 2 minutes, completely recovering his left arm, and leaving his right arm at Level 1 and his feet at 3. The next Levels dissipate after 4 hours of rest, which leaves Conan's right arm with no further Temp* Levels, and his feet now have 2 Levels left. As seen from the Recovery Time table, after the first two Levels are gone, the rest will take 24 hours each, so after 48 hours Conan's feet feel perfect, except for the 2 PD he suffered to both of them from the Temp* Levels beyond 2. Thus, despite having recovered from the fatigue, Conan still has to shrug off a PD Total of 4, due to the tearing of the muscles. Nothing that would bother our mighty savage.

Strength-Based Activities

A character's **Strength (STR)** characteristic is the biggest factor in determining how long he can keep on going without developing too much fatigue to his limbs. The following rules deal with various activities that may develop fatigue specifically to one's limbs.

If short breaks are taken, use the **Extended Anaerobic** rules for accruing bodily fatigue. Otherwise, use the **Short-Term Fatigue** rules (including Extended Anaerobic x 2, as normal).

On the **Strength Limits Table** (in the end of these rules) find the weight limit in pounds for the current activity. If it isn't listed, use the limit for an activity that most resembles it. Compare this **Strength Limit**, to the amount lifted per Repetition or on that Phase, on the appropriate feat table below, to find how many **Repetitions (Reps)** or **Phases** worth of activity the character can sustain. In the case of fractions, multiply the fractional amount by **100** to find the **00 - 99** chance of succeeding on that last Repetition or Phase. The selected row also gives the Temp* accrued in the limb(s) used.

"If you can lift one hundred pounds twenty times in five minutes, why can't you lift five hundred pounds in twenty minutes? Are you some kind of Attitude Officer?"

Sergeant Sugar to his Officer-in-Charge

Bench Press / Digging / Overhead Lift / Push-Ups: For reference, see the table below. These special rules represent the weight in pounds a character can bench press, or put above his head. This can also model digging. Halve the limit if using only one hand. Digging heavy matter like dirt, manure, or wet snow counts as being over 50% the limit; light matter like apples, garbage, or dry snow is deemed up to 50% the limit. Digging also affects the legs at half rate, so if a character's arms each took Temp*2, each leg would take Temp*1. For push-ups, apply **25%** of the character's own weight, plus any weight directly carried on his torso, to the bench press limit.

Strength Limit	Bench Press, Digging, Overhead Lift, or Push-Ups	Temp*
Within 10% of the Limit	AV / 50 Reps or Phases	Temp*2
Over 50% of the Limit	AV / 10 Reps or Phases	Temp*1
Up to 50% of the Limit	AV / 2 Reps or Phases	Temp*1

Chin-Up / Dead Lift / Stock-Lifting: For reference, see the table below. This represents the weight in pounds a character can haul to do a chin-up (including his own weight), or lift to waist level from the ground. Halve the limit if using only one hand.

For stock-lifting, like loading a truck, presume one trip of stock weighs 40 lbs, and each round trip takes **21AC**. When time is an issue, Reps per minute would equal **1.4** x the character's CA expended per Phase.

Strength Limit	Chin-Up, Dead Lift, or Stock-Lifting	Temp*
Within 10% of the Limit	AV / 50 Reps or Phases	Temp*2
Over 2/3 of the Limit	AV / 10 Reps or Phases	Temp*1
Up to 2/3 of the Limit	AV / 4 Reps or Phases	Temp*1

Drag / Worn: This represents the weight in pounds a character can wear and still stand, or can drag across asphalt. Reduce the limit by **25%** per limb not in use.

Strength Limit	Drag / Worn	Temp*
Over 50% of the Limit	AV Phases	Temp*2
Up to 50% of the Limit	AV Phases x 2	Temp*1

Hang: This represents the weight in pounds a character can support while hanging from a bar. **Halve** the limit if using only one hand; **double** if using both legs as well.

Strength Limit	Hang	Temp*
Within 10% of the Limit	AV / 50 Phases	Temp*2
Over 2/3 of the Limit	AV / 10 Phases	Temp*1
Up to 2/3 of the Limit	AV / 4 Phases	Temp*1

Sit-Ups: This represents the weight in pounds a character can haul up off the floor to his bent knees using abdominal power. Each Temp* Level reduces **Maximum Speed (MS)** by 1.

Strength Limit	Sit-Ups	Temp* to Abdomen
Within 20% of the Limit	AV / 10 Reps or Phases	Temp*2
Over 2/3 of the Limit	AV / 4 Reps or Phases	Temp*1
Up to 2/3 of the Limit	AV x .75 Reps or Phases	Temp*1

Melee: Each melee weapon is rated as to the **Strength (STR)** characteristic needed to wield it easily. Presume unarmed maneuvers to always be within the needed STR, unless the character's pertinent limbs are weighted with pounds greater than his STR.

STR Requirement	Melee	Temp*
STR < 50% of required	AV / 50 Phases	Temp*2
STR < required	AV / 4 Phases	Temp*1
STR required or better	AV Phases	Temp*1



	Medieval Weapons	Hands	STR Req.	Modern Weapons	Hands	STR Req.	
"Look, you stupid bastard, you've got no arms left !"	Axe, Battle	1	18	Axe, Wood/Fire	1	16	
		2	15		2	13	
	Axe, War	2	13	Baseball Bat	1	15	
	Club	1	10		2	12	
	Dagger	1	6	Bullwhip	1	9	
	Mace	2	13	Chainsaw, 18"	1	18	
	Military Flail	1	18		2	15	
		2	16	Chainsaw, 36"	1	20	
	Nunchaku	1	11		2	18	
	Polearm	choked	15	Chair	1	17	
Arthur, King of the Britons		long grip	18		2	14	
	Quarterstaff	choked	11	Hammer, 2 lb	1	11	
		long grip	13		2	9	
	Rock, 1.5 lb	1	6	Hammer, Sledge	1	21	
	Rock, 10 lb	2	18		2	18	
	"Yes I have."	Spear, Light	1	15	Knife, Pocket	1	4
			2	13	Pistol	1	7
	The Black Knight - Monty Python and The Holy Grail	Spear, Heavy	2	15	Rifle & Bayonet	1	17
		Stick	1	6		2	13
		Sword, Bastard	1	16	Sub-machine Gun	1	13
		2	14		2	10	
Sword, Broad		1	11				
Sword, Great		2	16				
Sword, Rapier		1	9				
Sword, Short		1	9				

Fumbles

A character's chance of **Fumbling** his weapon with a **3(6)** roll during an attack increased by his highest Temp* Level for the relevant arm(s). Thus, Temp*1 means a fumble on an attack roll of 17-18, Temp*2 fumbles on 16-18, and so on. Also, add the Temp* Level to the **0 - 9** Fumble roll.

Bows, or melee weapons using the **00 - 99** system, increase their Fumble chance from 98, by the **Temp* Level times 5**. Thus, an archer with one or both arms at temp*2, would fumble on a roll of 88 - 98.

The effective Temp* Level is adjusted for the purpose of Fumbling, by the conditions below.

Condition	Modifier	Condition	Modifier
Wet handle, ribbed	+ Temp*2	Close Quarters	
Wet handle, smooth	+ Temp*4	Normal Strike	+ Temp*2
Oily handle, ribbed	+ Temp*8	Set Strike	+ Temp*4
Oily handle, smooth	+ Temp*12		



STRENGTH LIMITS TABLE

Strength	Bench Press Digging Overhead Lift Push-Ups	Chin-Ups Dead-Lift Hang Stock-Lifting	Drag Worn	Sit-Ups
21	550	1200	3023	688
20	415	900	2389	519
19	275	600	1589	344
18	185	405	1054	231
17	165	365	756	206
16	150	325	565	188
15	130	285	463	163
14	115	245	378	144
13	110	235	365	138
12	100	225	350	125
10	95	215	329	119
9	85	205	300	106
8	75	181	282	94
7	65	160	250	81
6	60	146	236	75
5	55	120	197	69
4	40	91	158	50
3	35	75	100	44
2	25	60	70	31
1	15	30	40	19