

More Low Tech Medicine for GURPS

c. 1993, 1995 Thomas Barnes

HARMFUL TREATMENT - At some times and places, medicine was incredibly brutal and often did more harm than good.

The GM must determine how likely the medicine of the period is to harm the patient. Roll under 10+ Medical TL to avoid harmful effects of a treatment, or use the table below.

If the GM's secret roll for medical effectiveness is over this number the "proper" treatment as given by a Physician, Pharmacist, or Herbalist will injure the patient. An injurious treatment will result in 1d6-3 (minimum 1) points of damage to the patient. The GM can modify the damage up or down as he sees fit. Herbal treatments tend to be less damaging than other treatments.

AVOIDING HARMFUL TREATMENT - If a physician wishes to avoid doing damage to a patient, he must make 2 physician rolls. The first roll allows the doctor to realize that the currently accepted treatment is harmful. It is made at Physician (or Surgery) -5. Medical professionals tend to be very conservative about new treatments.

If the doctor realizes the currently accepted treatment is ineffective or harmful, he may do research to come up with a new treatment. Roll vs. Skill-10 to come up with something new. A successful roll means that the physician has come up with a less harmful (not necessarily more effective, just less harmful) treatment. A failure means that the doctor either fails to come up with something new, or comes up with an equally harmful treatment. A Critical Failure means that the treatment will kill the patient. A Critical Success means that the doctor comes up with something that is actually beneficial!

A third roll is required to properly administer the new treatment.

LIKELIHOOD OF "PROPER" TREATMENT BEING HURTFUL OR INEFFECTUAL

"Primitive" Medicine 13+
Ancient Near East 12+
Greek/Roman World 13+
Migration Era 12+
Early Medieval 12+
Late Medieval 11+
Renaissance 11+
17th Century 11+
18th Century 11+
Herbalism 13+
Homeopathy 13+
Traditional Midwifery 13+
Pragmatic Surgery 13+
Napoleonic French 12+
Early 19th Century 11+
Mid 19th Century 13+
Late 19th Century 14+
"Modern" 17+

SURGERY - Surgery will allow most damage to be stabilized so it will heal.

LOW-TECH SURGERY - Prior to the discovery of Anesthesia (T.L.5) and Antiseptis (T.L.5-6) surgery was a grubby, brutal art.

NO ANESTHESIA - Without anesthesia, a patient must make a Will roll each 30 seconds not to scream and struggle as the surgeon cuts. The surgeon is at -4 to surgery skill if the victim struggles, -6 if he is trying to do complex or delicate work, like chest, abdominal or brain surgery.

This penalty can be halved if the surgeon has a couple of burly assistants to hold the patient down. (Roll a contest of ST between the patient and all the physician's assistants.)

If the operation will do more than 1 point of damage to the patient, the patient must roll to see if he goes into Shock every 30 seconds the surgeon works. If he is already in shock he doesn't get worse. Fortunately, a patient in shock doesn't struggle...

NO ANTISEPSIS - Without knowledge of antiseptis, surgeons operated in their street clothes, with unwashed hands and dirty instruments. There is a -1 to -4 roll to the patient's HT to avoid having his wounds infected by the surgeon, depending on the cleanliness of the environment. A "clean" outdoor setting would be at -1, a hospital would be at -2, a field hospital after a battle would be at -4.

A modern (T.L. 6+) surgeon forced to work without antiseptis will try to be as clean as possible, he will be at -0 to -2 to infect the wound, depending on his pre-operative precautions.

Ordinary antiseptis gives +2 to the patient's HT to avoid post operative infection.

At T.L. 6 antibiotics change the face of surgery. Antibiotics give +1 to +6 to HT to resist infection and allow even the most dirt-encrusted belly wound to have a good chance of healing.

LOW TECH PROCEDURES - A low-tech surgeon can remove foreign objects from the body, amputate limbs, and suture wounds. Each attempt takes 5 minutes and requires a successful surgery roll.

AMPUTATIONS - Amputations are the only sure way of avoiding eventual infection (and death from infection) of a shattered limb. The only solution to a crippled limb that was badly crushed, cut, or shot up, or for a complex fracture was to amputate.

Amputations of the upper leg or arm are at -2 to skill and do 1d6 damage. Amputations of the toes, fingers, hand, or foot are at +2 to skill and do 1d6-3 (minimum 1 point). Other amputations do 1d6-2 (minimum 2 points).

The patient must immediately roll for Shock, Unconsciousness and Stun, if he isn't Stunned, Shocked, or Unconscious already. He need not roll for Bleeding and Severe Bleeding, since a competent surgeon can control the bleeding.

REMOVE FOREIGN OBJECTS - Missiles such as bullets and arrows can be probed for and removed. Irregardless of the success or failure of each "fishing expedition" the surgeon does 1 point of damage.

If the foreign object is removed, it can't serve as a source of infection or do more damage and the surgeon can suture the wound.

SUTURE WOUNDS - A surgeon can suture any wound that he has stabilized by stopping the bleeding and removing any foreign objects. This takes 1

minute per point of damage to be sutured. A successful roll closes the wound so that it can heal properly. This operation does no damage.

CAUTERIZE WOUNDS - Internal bleeding can be stopped by pouring hot oil into the wound. This does 1d6 points of damage to the victim and requires an immediate roll to see if the victim goes into shock, if he isn't already there. The wound is cauterized if a Surgery roll -1 per 5 points of damage the wound did is successful. If the surgery roll fails the bleeding is not stopped, but the patient may make another HT roll at +4 on the severe bleeding table to see if the rate of blood loss slowed. Bleeding will never get worse. There is no bonus to avoid infection with this technique.

Historically, this technique was only used at TL 3-4. It was abandoned as being ineffective.

TREPANNING - Trepanning is at -2 to skill. Failure with a low-tech trepanning does 2d6 damage to the patient, causes severe bleeding and sends the patient into shock. Success inflicts 1d6-2 damage (minimum 1 point) to the patient's head. The patient must roll for Shock, Unconsciousness, Bleeding and Infection as usual.

High-tech surgeons use trepanning to relieve intra-cranial pressure from meningitis or intra-cranial bleeding, where excessive pressure on the brain will cause brain damage. A failure means that the pressure on the patient's brain isn't relieved. A successful roll means that the pressure is relieved. On a critical failure, the patient takes damage like a failed low-tech trepanning.

On a normal failure, or a success, the patient takes 1d6-3 points of damage to the head.

EXPERIMENTAL SURGERY - TL 4 & 5 surgeons had a pretty good grasp of anatomy, they just didn't have the tools required to perform more complex surgery safely and easily. A low-tech surgeon CAN attempt most standard High-Tech procedures at the normal TL penalty and with all the penalties for no antisepsis and no anesthesia.

The patient must roll for Shock, Pain, Bleeding, Severe Bleeding and Unconsciousness normally during the operation.

When you consider that a modern operation takes 30 minutes or so, you understand why low-tech surgery emphasised speed.

HIGH TECH SURGERY - At T.L. 6+ successful Surgery roll can stabilize all but the most severe injuries so they can heal. Surgery can reduce complex fractures, set compound fractures, stop internal bleeding, remove foreign objects from the body and amputate limbs on a simple skill roll.

Surgery to the abdomen, chest, organs, head or brain is at - 1 to -6 depending on the delicacy of the surgery and the amount of damage the patient has sustained.

Modern surgery will do 1d6-3 if it was an amputation or surgery to the chest or abdomen. It will do 1d6-4 (minimum of 1 point) damage on any other type of surgery. This assumes a fully equipped, modern operating room with full staff, general anesthesia and plenty of blood, drugs and plasma on hand. If the conditions are less favorable, the GM may rule that the operation does more damage.

Modern surgery requires 20 minutes to treat a non-crippling wound with no special effects and longer periods of time for more severe injuries. As a very rough rule add 5 minutes per point of damage the wound did to the 20 minute minimum, to a maximum of about 4 hours.

ORGAN DAMAGE - Wounds to the heart, lungs, stomach, intestines and bladder can be treated so that the organ is restored to more or less normal function. Wounds to the liver that didn't completely shatter the liver and wounds to the kidney, spleen or gall bladder can be stabilized but can't really be repaired at TL 6-7, Non-vital organs are generally partially or fully removed if severely damaged. Wounds to the brain can be stabilized but no repair is possible.

Surgery rolls to repair damage to the heart or lungs or to stabilize the brain are at -4, all other rolls are normal.

A surgeon can attempt to save the spleen, a shattered liver, a kidney or a gall bladder, but he is at -10 to skill and such an operation would take double time and do double damage (in blood loss) to the patient. The patient would be at HT-4 to recover use of the organ and at -4 to avoid infection if the organ doesn't recover. Such surgery would be completely experimental at TL 6-7 and could only be attempted at the best equipped hospitals.

Once an organ has been "repaired" or stabilized, it can start to heal.

SPECIALIZED SURGERY - Certain surgeons who have specialized in a particular branch of surgery can perform other procedures. "General" surgeons attempting specialized surgery are at -4 to skill.

RECONSTRUCTIVE PLASTIC SURGERY - Amputated noses, ears and disfiguring damage to the face and body can be repaired. The amount and type of damage done determines the time and skill penalty to do this sort of surgery. Simple reconstructive surgery was known in some cultures as early as TL 2.

Reconstructing a nose or ear is easy, +2 to skill and 2 hours. Repairing a face that has been completely smashed in might take 4-6 hours and be at a -6 to skill. Some damage can't be healed even at T.L. 6-7 - like burns.

A failed surgery roll means that the patient's Appearance is reduced by one level (to a minimum of Hideous). A critical failure (or a failure by an untrained surgeon) reduces appearance by two levels. A critical success increases Appearance by one level.

Repairing burn damage is very hard, -8 to skill. When repairing severe burns to the face, the surgeon can never improve the patients appearance beyond Attractive at TL 6-7.

PLASTIC SURGERY - A plastic surgeon can operate on a non- injured person to improve their appearance, hide aging or change their appearance.

A series of operations to change appearance might take one month (and a month to heal) and change appearance completely on a successful roll. A failed roll either lowers Appearance, or means that the change wasn't as complete as might be hoped. A Critical Failure reduces the character's Appearance to Hideous.

An operation to make a character appear 10 to 20 years younger (if they are aged) takes 2 hours and is at +4 to skill roll. (It is a simple, common operation). A failure means the character doesn't look as youthful as he hoped to. A critical failure reduces appearance by one level.

An operation to improve a character's appearance takes the same amount of time. A Critical Success raises the character's appearance by 2 levels (to a maximum of Extremely Attractive). A success increases appearance by one level. A failure reduces appearance by one level. A

critical failure reduces appearance 2 levels.

Operations to improve appearance are cumulative.

NEUROSURGERY - Nerve damage can be repaired if it has not begun to heal yet. At TL 6-7, all neurosurgery is at -4 to skill. A successful neurosurgery roll gives +4 to HT to recover from a limb crippled by nerve damage or from paralysis due to spine or brain injury.

The patient and the surgeon get one try each. If the surgery doesn't work, or the patient doesn't heal, the damage is permanent to some degree. If either roll was missed by 5+ there is full paralysis, otherwise there is partial paralysis.

Neurosurgery requires 4-6 hours.

ORTHOPEDIC SURGERY - Shattered bones can be repaired if they have not yet healed. An orthopedic surgeon can mend a shattered bone by rolling vs. skill. This gives the patient +5 to HT to heal a limb crippled by an injury that shattered the bone. Both the surgeon and the patient get one try each. If the surgery doesn't work, the patient is at -1 HT to heal.

If the patient's HT roll fails, then the limb remains crippled permanently.

REATTACHMENT SURGERY - Cleanly severed limbs, fingers and toes that have not been damaged or cut off for too long a time, can be re-attached using microsurgery. This is only available at a few specialized hospitals in the Western world at TL 7.

A successful surgery roll re-attaches the limb. The patient gets +2 to his HT roll to see if the limb "grafts" itself back onto the stump. A further roll vs. HT is required to regain full use of the limb, otherwise it is partially crippled.

Microsurgery takes 6 hours or more, special equipment and staff, and one or more microsurgeons.

ORGAN TRANSPLANTS - This sort of surgery requires a compatible organ to be transplanted, special equipment and specially trained staff. This procedure simulates liver, lung and heart transplants. Kidney transplants do not give a minus to HT rolls.

At TL 7, this procedure is only possible in a few specialized hospitals in the Western World.

A successful surgery roll transplants the organ. For each tow points by which the surgeon made his roll, the patient gets +1 to HT to accept the organ and recover. The operation itself does 3d6 points of damage.

A successful physician roll gives +1 to +4 to this roll, meaning that the physicians have prescribed the right mix of immuno-suppressive drugs and antibiotics.

The patient gets one roll vs. HT-8 to accept the organ and recover. If the patient misses the roll by less than four, he permanently loses 1 point of HT per point he missed the roll by. If he missed the roll by 4 or more, he rejects the organ. The surgeon can try again at -1. The whole process takes about 3 months and requires a large medical support team.

Assume that a suitable organ is available on a 5 or less each week.

SUPER MEDICINE - Assume that at TL 8 organ transplants and limb reattachment will become routine and that nerve and burn damage can be repaired.

At TL 9+ brain damage and all crippling injuries can be repaired.

