Stages of Shock

For a complete discussion, please visit: http://www.stagesofshock.com/index.html. The setting in which this model is useful is whenever you think there is reason to anticipate shock or it's already present. The most common conditions with potential for shock that you will see as a patroller are likely to be substantial bleeding (external or internal) and anaphylaxis. The information below is taken directly from the above site.

"Classically, shock is described in 3 stages (the last 3 of our classification). But I created this site to try to remind everyone interested that if you diagnose shock early, everyone will feel better: from patient, to treating staff, hospital administration and even health insurances carriers. I also created this site because I have seen too many physicians (including myself) "miss the boat" with their patients (reacting way, way, WAY, **WAY** too late), I started to view shock as a progressive and accelerating slide (a continuum)... a slide that starts with a local condition that ends up systemic and ultimately complicated by shock if left undiagnosed and untreated (nothing that you did no know already).

If one wants to take this approach of anticipating and detecting the drift toward shock (so that you can stop it), I now often work with this new paradigm of seeing shock in 5 stages instead of only three (2 stages of pre-shock and 3 stages of actual shock). In this new classification (not accepted by anyone right now, I must divulge) there might be opportunities to diagnose and treat patients much earlier and prevent shock altogether, or even correct shock when it is at an earlier stage. You (and your patients) will feel great to have stopped the slide early on. And you will save a lot of money to insurance carriers and hospitals.

This site was also created because of my mentoring from two of my teachers who created what I consider "the Book of Secrets in Medicine" - a unique book that contains general and fundamental mechanisms of cellular changes leading to explanations of tissue changes and diseases (see references for this site). And also because of the pathetic lack of any useful discussion regarding various types of shocks in MAJOR, multi-authored, cardiology textbooks (an omission that I consider detrimental to our treating staff and therefore patients).

(Note: some might critique these "new" stages 1 and 2 because patients are not in shock yet. I do not consider this as a good critique because our classification is similar to stage I and II of the NYHA Heart Failure classification. In NYHA Heart Failure stage I, patients may actually not be in heart failure at rest...)"

Stage 1: Anticipation stage (a new paradigm)

ANTICIPATION STAGE

The disease has started **but remains local.** Regardless, you should already suspect that shock could appear if the underlying disease is left undiagnosed and untreated. You should already be frantically diagnosing and treating the underlying condition...
Parameters are stable and within normal limits. There is usually enough time to diagnose and treat the underlying condition. But go frantic ! This is the best time because here you can prevent shock altogether... yessss !

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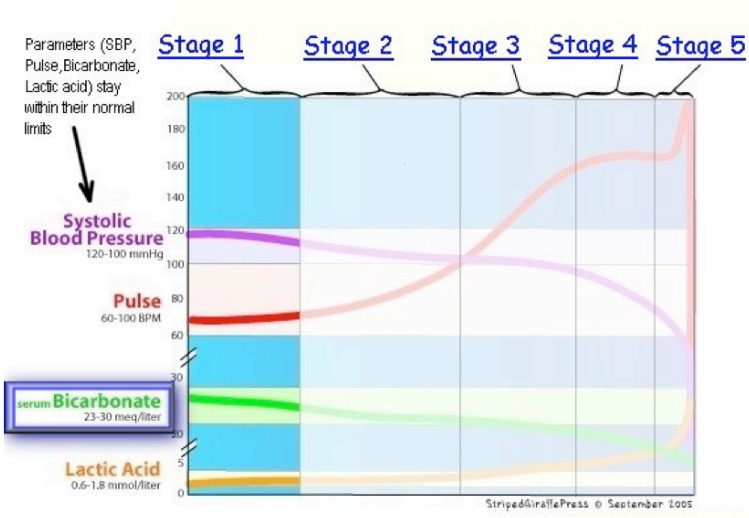

Stage 2: the very sneaky Pre-Shock Slide (a new paradigm)

The Pre-Shock Slide

The **disease is now systemic**.
Parameters drift, slip and slide... and **start hugging the upper or lower limit of their normal range**. . ..., **but there is no shock yet**!
The absence of shock is due to the fact that **compensatory mechanisms are at play**.
Well...well... well...if left untreated, our patient is now destined to slide into stage 3.
In fact, illness diagnosis and treatment should be fast and aggressive... right now...!.

*(This **pre-shock slide** is, sadly, completely missed by many physicians --- one possible reason is that parameters we choose here are generally not stored in a graphic way but instead as numbers in various patient data collection)*

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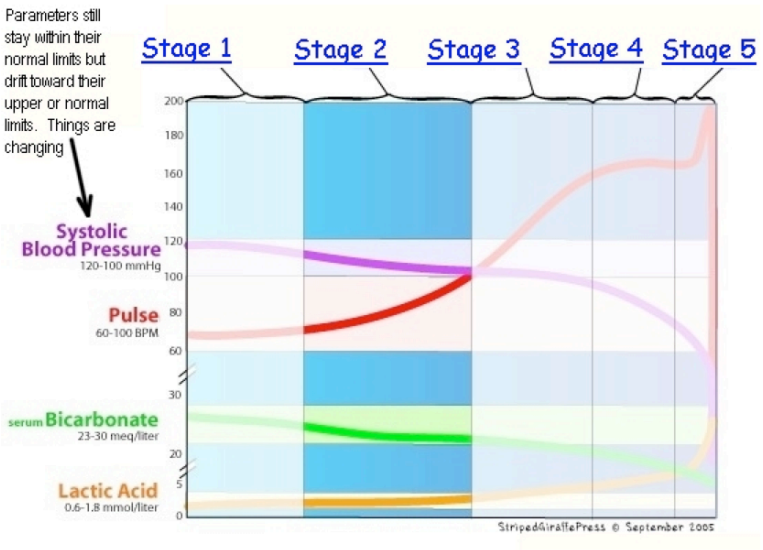

Stage 3: Compensated Shock

COMPENSATED SHOCK

Compensated shock can start with low normal blood pressure: a condition called
"normotensive, cryptic shock"
Many physicians fail tot recognize the early part of this stage: *"he/she does not look right"*... and *"I don't know what is going on"*, *"and the the blood pressure is not too bad"*...
Note: normotensive or hypertensive shocks are not mentioned in major cardiology textbooks ! (see references).

The proof that a patient is in shock with normal blood pressure is the appearance of metabolic acidosis due to some organ hypoperfusion. The reason for normotension (or even hypertension in some cases) is that blood pressure is maintained initially thanks to marked activation of many compensatory mechanisms (including the sympathetic nervous system). However, because organs suffer from inadequate perfusion, it is already a state of shock.

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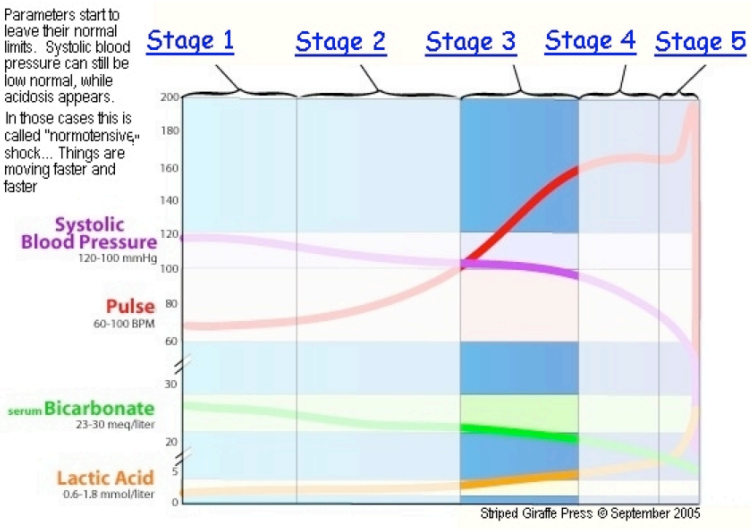
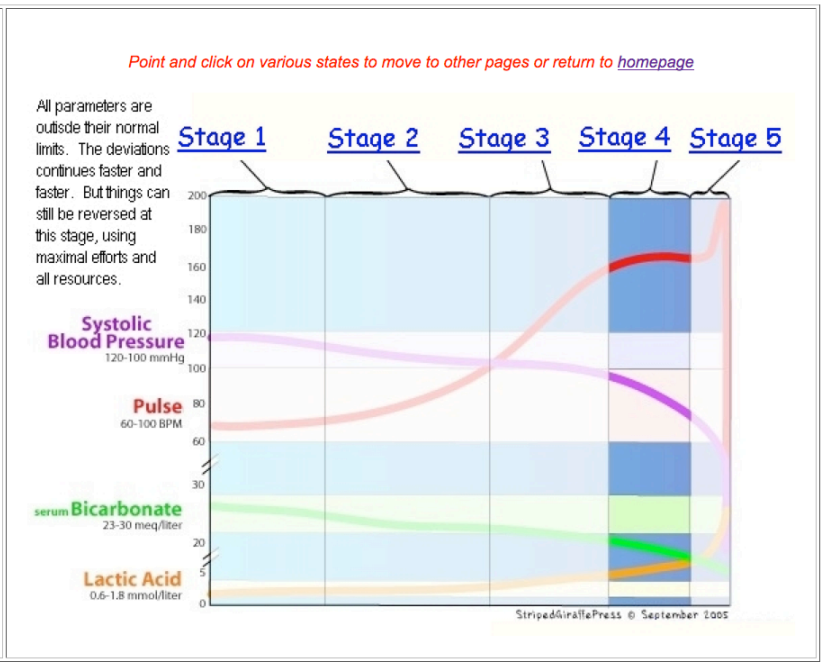


Stage 4: Decompensated Shock, reversible

DECOMPENSATED SHOCK, REVERSIBLE

Now everybody call this "SHOCK" because **hypotension** is always present at this stage., Normotension can only be restored with intravenous fluid (if indicated) and/or vasopressors. If you have not diagnosed the cause of shock by now, it will be very difficult to treat your patient. The reason? --- organs now suffer MODS/MODFS and acidosis is becoming rapidly more and more severe.

This systemic suffering worsens shock itself (vicious cycles) and leads to catastrophic microvascular damage, D.I.C. and S.I.R.S.



Stage 5: Decompensated Shock, Irreversible

Microvascular and organ damage are now **irreversible** (untreatable)
There is often a "last ditch" effort from the ischemic midbrain with an enormous discharge of endogenous catecholamines and this can create a last spike of sinus tachycardia (asterix*). We call stage 5 the "**whoops! stage**" --- too late to be able to turn things around.

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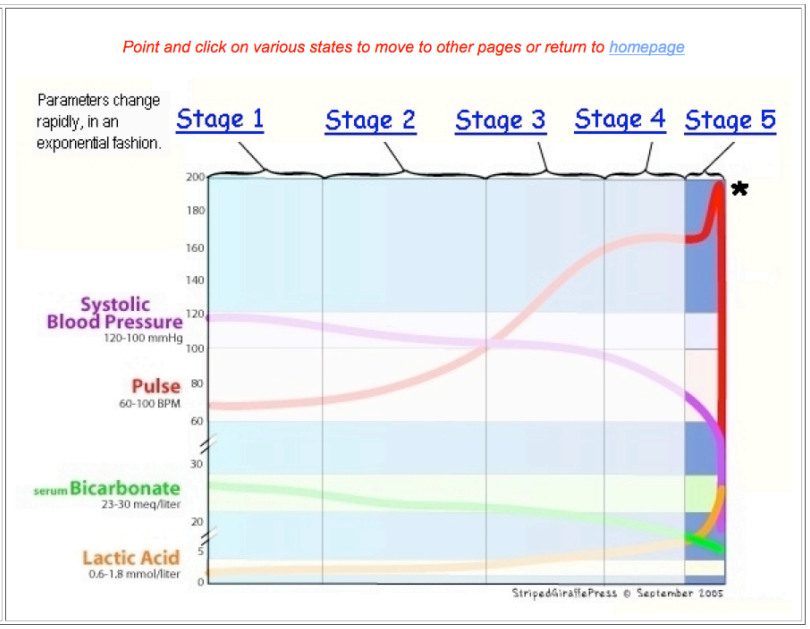

So, what can you do to prevent this slide into decompensated shock? You already know. Here's the short version:

1. Stop the bleeding (direct pressure, pressure points, tournequet as last resort)
2. If possible, lift the legs 20 degrees or so ("autotransfusion" of blood in the legs goes back to the heart).
3. Or tilt the entire bed or stretcher about 10 degrees head down.
4. Give a lot of oxygen (preferably by high flow mask)
5. For anaphylaxis, get out the EpiPen…if you aren't allowed to use it, find someone who can.