

# Gulf Coast Mariners Association



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## STRESS AND THE LICENSED MARINER

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## SOUNDING THE ALARM

We are indebted to Captain John R. Sutton, former President of the American Inland Mariners Association (AIM) for his perception in noting, following up, and then publicizing the untimely death of many towboat pilots on the western rivers. We reproduced his report containing 78 entries, most listing cause of death, in [Appendix #1] (below). The list was generated as a result of hundreds of telephone calls between pilots that knew the deceased or members of their families personally as well as from obituary notices. Considerable time and effort went into collecting this data. However, the report never claimed to be scientific. Rather, it used the limited resources available to river pilots. The report covers the period of the 1990s as far as 1997.

In the mid-1990s, AIM was a voluntary membership association of over 300 licensed river and canal towboat pilots. Captain Sutton spent countless hours on the telephone contacting friends, relatives and co-workers of deceased pilots to determine their cause of death. Some of this information was and is still available in the Waterways Journal obituaries,

but even more lies hidden within an industry where information passed between mariners is often discouraged and tightly controlled. The alarming statistic that Captain Sutton came across and publicized was that the lifespan of the average river pilot was only slightly more than 57 years. This figure was widely reported and is well known by mariners serving in the inland towing industry.

GCMA followed Captain Sutton's lead and recently updated the information in [Appendix #2] (below) from 1997 to 2004. Although GCMA followed the same format, the source of the information was taken from only one source, the Waterways Journal, a river industry trade publication. The dates included are from 1997 to the date of this report in the Fall of 2004. We present but do not attempt to analyze this data.

By contrast, the Time Almanac for 2002, a popular and readily available source of information, shows life expectancy at birth for white males in the general population (i.e., this group represents the largest group of river pilots) born in 1940 at 62.1 years; 1950 at 66.5 years; 1960 at 68.0 years; 1970 at 68.3 years; 1980 at 70.5 years; and 1990 at 72.7 years. Life expectancy for women is slightly less than 7 years longer than for men.

**Safety is a major problem in the towing industry.** Reassuring statements from industry trade associations not withstanding, an internal Coast Guard document dated May 12, 1994 and titled Towing Vessel Industry Personnel Exposure Data indicates that the towing industry is an incredibly unsafe place to work. This information is reproduced in GCMA Report #R-351 titled How Safe is the Towing Industry.

The Coast Guard keeps statistics on accidental deaths in the towing industry but these statistics only include deaths on the job from events such as falls overboard, collisions, allisions and other dramatic events. However, deaths occur during off-duty hours. Some are van crashes<sup>(1)</sup> that leave mariners dead on the highway on the way to or from work. These are not recorded in Coast Guard statistics because they did not happen on the water. Other deaths occur at home, in hospitals, nursing homes etc. after catastrophic health failures such as strokes and heart attacks. Coast Guard statistics on accidents involving personal injury have proven to be pitifully inaccurate and unreliable and have led GCMA to push for maintenance of accident statistics along the same lines as those used by the U.S. Department of Labor. [<sup>(1)</sup> Refer to GCMA Report #R-398, Crew Van – Death Van.]

Inland and Western Rivers towboat pilots were alerted to the dangers of working in this industry in 1997. However, events of the next few years pushed this important message into the background where it remains today – just one of many issues that cries for attention – "Vox clamantis in deserto."

A recent event, the destruction of the Interstate 40 bridge in Webbers Falls, OK, brings the issue to the forefront again. An excerpt from a preliminary statement by the National Transportation Safety Board, the lead investigators of this accident states, inter alia that:

"The National Transportation Safety Board determines that the probable cause of the ROBERT Y. LOVE's allision with the Interstate 40 bridge and its subsequent collapse was the

captain's loss of consciousness, possibly as the result of an unforeseeable abnormal heart rhythm.

As a result of this accident, fourteen innocent members of the public lost their lives. Many other lives were devastated including the knowledgeable and experienced river pilot who blacked out as he approached the bridge. He did not have a heart attack although he underwent surgery following the accident to control the medical problem that was only diagnosed after the accident. He did not suffer a stroke. However, in reviewing his work schedule that exceeded the legal 12-hour workday, he failed to obtain the required 6 hours of rest before taking command of the M/V ROBERT Y. LOVE. Stress must have played a role in this catastrophic accident.

## PURPOSE OF THIS REPORT

One of the goals of the Gulf Coast Mariners Association is to share information among lower-level mariners who serve on all types of commercial vessels of up to 1,600 gross register tons working on inland, rivers, and near-coastal routes. This report will pass credible information from one mariner to another outside normal business and governmental channels.

The information I have to share comes from my own experience and from the experience of other mariners about a condition that is often called "The Silent Killer" - Stress.

## EDITOR'S EXPERIENCES WITH STRESS

This section is not an autobiography, merely a statement about stress and to say I have taken steps to control its effect on my life.

I have run boats commercially since the early 1950's but never thought about or, in fact, never remember hearing about stress as a medical problem before 1980. Call it lack of attention, lack of interest, or just plain ignorance.

I don't claim to be an expert on stress, but I know much more about it today than I did in 1980 - an important year in my life. I suggest that you can learn a great deal about the subject of stress in general by reading [Appendix #3] prepared by a medical expert and placed on a website that claims 4,000,000 visitors.

I find running a boat commercially an emotionally satisfying and pleasant experience - doing what I want to do and being paid to do it. It is an active lifestyle, especially on smaller boats where there are generally only a small number of crewmembers. Each boat is different, and each job is different. There are schedules to meet and work to accomplish. But, when you are doing a job you enjoy, time passes quickly. When you are not doing a job you enjoy, time drags by and you wish you were somewhere else or doing something else.

By 1980, as a teacher by profession, I taught high school Social Studies, Coast Guard Auxiliary safe boating courses and a license study course at Young Memorial Vocational-Technical School in Morgan City, LA.

As a teacher, I was not satisfied with the cram courses and, therefore, wrote or edited a number of textbooks - lower-

level mariners could use to obtain their original Coast Guard licenses or upgrades to their merchant mariner documents. This job involves quite a bit of reading, studying boring government documents, and then turning the material into a meaningful course of study. There is little stress involved because I set my own deadlines and work at my own pace.

Throughout the 1970s, I alternated writing with working aboard tugs and offshore supply vessels including tug/supply boats, platform supply boats, utility boats and crewboats both in the United States and in Brazil.

For several years, I was General Manager of a boat company that operated nine crewboats and utility boats ranging from 77 to 110 feet. As I look back on it, this was a very stressful experience - 24/7. It was like trying to run a three-ring circus by myself, my wife Gwen, and a small office staff. We were willing and able to put in unlimited hours to cope with all sorts of breakdowns, personnel problems and operational emergencies.

After several years of riding an economic roller coaster, the investors decided to sell the company, and we were all able to put some money in the bank.

For the rest of the decade, I enjoyed the best of both worlds - running boats and preparing pertinent teaching material for the mariners I worked alongside.

In 1980, a former business associate recommended me to an investor who was starting a new offshore boat company. He planned to build at least two 120-foot oilfield utility boats in Gulf Coast shipyards and saw no conflict with my writing activities.

The job started out as part-time work planning construction of the new vessels with a naval architect. This was a great learning experience (aka "professionally rewarding") and was very enjoyable. As construction progressed, I went on the payroll one day per week making weekly visits to the shipyards in Mississippi and reporting back to the owner.

When we took delivery of the first utility boat, the owner put it to work on a long-term job several hundred miles away from home. I was able to select Captain Ellis Hughes, my senior of about 20 years and the Marine Superintendent of our former boat company who was both an experienced master and practical engineer to run the boat. I alternated with him every couple of weeks and ran the boat on his time off.

When the second boat came from the yard, I called up another of our former masters, Captain Jim Stevens. Both Ellis and Jim were reliable and trustworthy individuals. I became the third man on rotation so that I would fill in for either captain. My wife filled in for me at the office when I was offshore. I enjoyed the time at sea along with its challenges.

In retrospect, as General Manager I should have insisted on hiring a third captain - but the thought never occurred to me until the owner suddenly announced (against my advice) that he would be acquiring a third boat for his growing fleet. This boat was a dilapidated piece of junk that belonged in the scrap yard. It would prove to be an endless source of mechanical problems and require extensive renovations on a shoestring budget. The company really couldn't afford another salary and I never even brought up the matter of hiring another captain with the owner until it was time to crew the new boat.

All our boats ran from the same dock in the same port.

The dispatchers were helpful and cooperative. The two boats were new and had the normal problems that accompany all new equipment. Both boats would return to the same dock several times a week. I could handle most of the problems over the phone, and with a reliable crew who knew that the old company policies from my former company applied to the new company. The boats were beautiful and performed well. The pay was good. It appeared to be an idyllic situation.

One of the least enjoyable aspects was my command of the company carryall I used Chevy Suburban. For those who know Cameron, LA, it lies at the ends of the earth. With its steaming and stinking pogy plant and swarms of flies and mosquitoes it was not only the anus of the earth but also my repeated destination by carryall. As its driver and de facto Port Captain, I delivered parts, supplies, made crew change at all hours of the day and night. The trips covering long distances over mostly two-lane back roads were seemingly endless.

On one such trip, in the middle of a hot summer day, I backed out on the dock to deliver a load of groceries and parts that my crew had called in. I backed within about 50 feet of the boat (i.e., as far as it was safe to go on the rickety dock) and decided to unload the carryall and then call the crew who were inside the boat. Suddenly, I experienced severe chest pains and quickly sat on the tailgate.

The crew suddenly emerged from the boat, greeted me and, seeing that I had unloaded the van, passed the groceries across to the boat. After about 4 or 5 minutes of relaxation the pain passed. I said nothing about it I toughed it out.

My second warning came about six weeks later. I spent much of the day writing and doing routine office work. I also received a shipment of 50 cartons of looseleaf notebook covers, each weighing about 20 pounds. After unloading less than a dozen cartons, I experienced severe chest pain again worse than before. This time I told my wife who called the doctor.

The rest of the story is that my doctor sent me to a Cardiologist who put me in the hospital. After 5 days of tests, he transferred me by ambulance to another hospital where an experienced surgeon performed an emergency quadruple bypass surgery I the first of two such operations I would receive. The second surgery released me from the hospital two days before, but in time to cope with, Hurricane Andrew.

Following each surgery, I spent a week recuperating in the hospital. I recuperated for several days in intensive care plugged into a bunch of high-tech equipment and then gradually got back on my feet and attended mandatory stress management classes in the hospital.

Frankly, I never knew anything or really cared anything about stress until that time when it suddenly became very real and very important factor I had to manage the rest of my life.

Fortunately, as happened recently with former President Clinton, the doctors caught the condition before I had a heart attack or stroke that could have killed or disabled me.

Understanding the nature of the stress generated by my lifestyle, I resigned from my position at the new boat company and turned the job over to my chosen successor. I settled into my low stress career of writing textbooks and accepted several teaching assignments in Alaska. My Cardiologist placed me on a regimen of cholesterol-lowering

drugs, dictated my diet and encouraged me to walk four or five miles every day. However, do not mistake me for a health nut. Walking serves two purposes, one real and one a rationalization: health and transportation to work!

Since the bypass operation involves having your chest wired back together, the doctor placed me on a weight lifting limit of 40 pounds. A friend of mine, who had a similar operation, exceeded his weight limit and had to be rushed to the hospital to be re-wired so I am careful.

The Coast Guard follows my case at renewal time and requires a statement from my Cardiologist and a stress test at the time of license renewal. I must notify the Coast Guard within 30 days if there is any change in my condition. I might have to relinquish my license if my health takes a turn for the worse at any time. The cost of health insurance and life insurance (if available) will skyrocket with deteriorating health.

Like President Clinton, I was lucky they caught the problem in time. Otherwise, if I had persisted in my very stressful activities, I would have been dead at age 45. In addition, I was extremely fortunate in that I had never smoked, and had never spent much time around chronic smokers generating second-hand smoke, was not overweight and did not have diabetes. If I had, I might not be here today.

As I mentioned earlier, one of the goals of the Gulf Coast Mariners Association is to share information among lower-level mariners. This is why, as a Teacher, I encouraged Captain Ray Ashford and with his help and support, we issued GCMA Report #R-341 titled Smoking and Your Health Afloat. This report is available on our internet website.

In so many of the things we do as an Association, we get very little cooperation or encouragement from either the Coast Guard or boat companies in discouraging either smoking or ameliorating the effects of second-hand smoke that is circulated and re-circulated throughout small vessels where it is allowed. If mariners have any rights at all, I believe it should be the right to breathe fresh air. It is especially ironic when you cannot do so even at sea!

## SIGNS OF STRESS THAT AFFECT MARINERS

As [Appendix #3] will tell you, stress may result from an accumulation of aggravations on the job and off the job. Here is a list of many of the aggravations present **in the marine industry on small commercial vessels**. Add to this the long list given in [Appendix #3] and you will see why stress can be such a powerful and pervasive factor.

- Worries about the job and how long it may or may not last. Further stress and worry occurs in finding a new job.
- Thoughts about retirement including concerns as to whether you can hold out to age 62 or 65 when Social Security kicks in.
- Concerns about health insurance, its costs and coverage for yourself and your family. Includes the stress generated by the problem of the eligibility waiting periods for coverage if you change jobs. This often extends for 90 days or more during which time you and your family are at risk for catastrophic injuries and their bills.
- Competition with others for the job you hold or the job you would like to get.

- Frequent changes in employment that plague the marine industry bring all sorts of new challenges.
- The fear of being laid off or blackballed if you make a legitimate safety complaint that could cost the company money and especially insisting that repairs or corrections be made for safety reasons.
- Office politics and their effects on your employment status..
- You live in two separate worlds. You worry about events taking place at home while you are at work and trying to manage them from a distance.
- Social isolation on the boat arising from new security concerns and the fact that visitors often cannot come on board any more.
- Poor sleep patterns that keep you constantly on edge.
- Noise that disturbs your sleep during off-duty hours. Shaking, vibration, and excessive noise in the living quarters of many vessels. Being kept awake during the day by a deck crew using a needle gun, grinder, or chipping hammer.
- Crewmembers you supervise who simply won't follow orders. Others are too rude to turn down the TV, put out their cigarettes or keep the boat clean.
- Lack of support from company human resources personnel who are just as likely to fire you for not being able to manage your crew properly if they complain.
- Green deckhands who do not know enough about safety aboard a vessel to look out for their own welfare so you must always look after it for them.
- Engineers that know less about the engine room than you do because most engineers never receive any formal training. This is especially true on vessels of less than 200 gross register tons.
- Being called upon to make an unscheduled trip either on your off-duty time, or to extend your trip, or to go to another boat.
- Having to change plans you make for your time off when you must work over to cover for someone else.
- Frustration on crew change day when your relief does not show up.
- Worries about transportation to or from the boat. [*Refer to GCMA Report #R-398, Crew Van – Death Van, on our internet website.*]
- Having to take charge of a watch without adequate rest and especially if you know it is a violation of the law.
- Having to work in excess of 12-hours per day in violation of the law. [*Refer to GCMA Report #R-258, Rev. 1, Watchkeeping and Work-hour Limitations on Offshore Supply Vessels, Tugs, and Crewboats Utilizing a Two-Watch System on our internet website.*]
- Worry about going to sleep when you believe the person at the helm lacks the proper experience or is not posted on the route ahead.
- The pressure put upon you to operate in fog or to meet unrealistic schedule demands.
- Knowledge that the office is tracking your boat and will question you on your lack of progress if you slow down or stop for any reason.
- The frustration of becoming windbound on an underpowered tow.
- Handling oversize or overloaded tows.
- Pushing barges or equipment that you cannot see around
- Being assigned to a vessel that is damaged or simply does not maneuver properly.

- The effects of an unbalanced diet on boats without regularly assigned cooks.

### CASE #1: CAPTAIN COLLINS VERRET

As a mariner I believe you have a chance to manage stress:

- IF you understand the pervasive nature of stress as described in [Appendix 3].
- IF you discuss stress with your doctor and then understand and follow his orders.
- IF you can control your life when you are off-duty at home.
- IF you can control your life when on the boat while off duty. Formal Crew Endurance Management (CEMS) training can help.
- IF you can control your life on the job during working hours and control your work environment.

Because of working conditions beyond his control, Captain Collins Verret was unable to maintain control over his work environment.

Collins was an experienced tugboat master working offshore in the mineral and oil industry in the Gulf of Mexico. He had many years of service in the offshore oil and towing sectors of the marine industry. He is friendly, outgoing and always did his best to satisfy his employer. He is the type of employee I would have given my eye teeth to find when I was in the boat business.

Captain Verret's career ended precipitously when he suffered a paralytic stroke while piloting his tugboat from Port Arthur, Texas, to an offshore pipelaying barge in the Gulf of Mexico.

GCMA followed his case from the day of his accident for over two years and presented the matter to our mariners in **GCMA Report #R-370** on June 16, 2003. However, in this report, we will limit ourselves with the matter of stress and it destroyed his career afloat. [*Refer to GCMA Report #R-370, 12-Hour Rule Violations: The Verret Case on our internet website.*]

I knew Captain Verret for a number of years before his stroke. At license renewal time, he came to my office to consult me about filing his license renewal application. As we discussed his application, I noted that he had undergone bypass surgery. Consequently, he had to request a medical waiver from the Coast Guard in order to renew his license. Since I experienced the same problem renewing my license, I knew how to advise him on the necessary paperwork.

While Collins planned to continue his work at sea and believed he was physically able to do so, I opted to follow a different and less stressful path in the marine industry essentially by taking a desk job. **Unfortunately, this industry does not cut any slack for older workers.** I view this as a significant shortcoming in the industry's personnel practices. It is unfortunate for the older mariner who finds himself facing challenges where his health and his attempt to maintain the pace of a younger man are in perpetual conflict. It is also unfortunate for the industry because a large portion of its most experienced workforce is aging. Health problems inevitably increase with age. Surviving until Social Security comes into play is an increasing challenge for many older mariners.

## EXCERPTS FROM COURT DEPOSITION

Management struggles to fill slots on its undermanned vessels and blissfully disregards the fact that the 84-hour workweek remains as an acceptable anachronism from the nineteenth century. Young Coast Guard officers simply do not seem to understand this message as they fail to take even the most basic steps to enforce work-hour laws for our mariners. Nor do mariners observe work-hour laws as they were designed to protect their health as well as the environment. Greed affects both individual mariners as well as corporate entities.

We exchanged stories of our bypass operations and I directed him in completing the paperwork. He was employed by a large local company, Delta Towing, that recently acquired the assets of several other smaller companies. Collins was the master on an anchor-handling tug, a job that many licensed masters choose to avoid because of the hard work and long hours it involves as well as stress. However, the job paid well and the work was steady.

Collins is extremely conscientious and willing to go out of his way to comply with all government regulations and to serve his employer loyally and faithfully. With a spotless record, Collins is the kind of employee every employer seeks.

Unfortunately, Collins, in his mid-fifties and looking at retiring after a few more years, did not have any real control over the anchor handling job he was assigned to. In fact, another younger Captain turned down the job. Anchor handling, when done correctly, is an extremely specialized operation that can call upon the vessel to service the rig or pipeline barge it attends 24 hours a day. In fact, the customer pays for a vessel crewed for 24-hour service.

The two-watch system requires that each of the two licensed officers stand watch a total of 12 hours out of every 24 hours and no more! However, the single mate assigned to the boat was not proficient in his duties.

In addition to other duties, Captain Verret was expected to train the mate that, in itself, can be a stressful activity. Although there was no conflict between the master and his mate, Collins could not trust his subordinate to maneuver the boat or handle anchors without supervision.

On an anchor-handling tug, the master has a great deal of responsibility to protect his crew when they are out on the after deck handling anchors and associated gear. This meant that Collins was in the pilothouse for much more than 12 hours a day. In fact, it is difficult if not impossible to honor the 12-hour rule and also train your mate who is the only other licensed deck officer on the boat.

On the day he experienced the stroke, Collins was uncertain whether his mate was proficient enough to enter Sabine Pass with its abundant deep-draft traffic in heavy weather. Consequently, he brought the boat into port by himself. During the brief stay in port, Collins supervised and signed for repairs to the towing winch and then took the boat back out to sea. He was alone in the pilothouse with the vessel on autopilot when the stroke hit.

GCMA Report #R-370 describes the accident, the lawsuit that followed and the judgment that provided monetary compensation for his injuries. In preparation for the trial, Collins' lawyer Mark Ross, Esq., deposed Dr. John Stirling Meyers, a medical college professor and an expert in the matter of stress. Excerpts from his testimony appear below:

*[Editorial Note: These are excerpts from the deposition of Dr. John Stirling Meyers. "TR" refers to the page numbers taken from the transcript of the deposition. Emphasis in bold type is ours.]*

### TR 24-25

Q. Do you have an opinion as to the onset of the stroke in this case based upon anything you've reviewed, the time of onset?

A. I think I do. Yes.

Q. Okay. When would that be?

A. Well, it is my understanding that the captain had been working unusually long hours and he was on the bridge of the boat and he was actually steering with the wheel and he collapsed, felt dizzy collapsed. The dizziness is reported after the event, sometime later; but all we know is the last communication from the captain to the mate and the mate was training by the captain to be a captain replacement and he was in training and they were supposed to take alternating training 12-hour broken-up times in a 24-hour interval. But because the mate required supervision and it was pretty tricky laying the anchors down for a huge boat,<sup>(1)</sup> that he felt it necessary for him to be at the wheel. But 20 minutes before the mate went in to look at the captain, he had spoken to him, made some sort of verbal communication with the mate; and he spoke all right and seemed to make sense. [<sup>(1)</sup> i.e. setting anchors for the lay barge.]

### TR 28-30

Q. Do you have any idea is there anything in the objective findings, the films or the medical records that tip you off to say this is a fatigue or a stress-related embolic event, apart from any factual evidence of the case? Assuming now hypothetically.

A. Yes.

Q. Okay.

A. I think that his blood pressure certainly when he arrived at Lake Charles General Hospital where he had the TPA given and that his blood pressure was elevated. **He had a well-known history in the records of hypertension**, including his private physician. The records they made at the Oschner Clinic, before and after the stroke, would indicate that he had labile<sup>(1)</sup> hypertension. He was on medication for hypertension. Matter of fact, he was on two different medications for hypertension, which is a beta blocker Acupril, which is one means that he had pretty difficult-to-control hypertension. [<sup>(1)</sup> **Vocabulary: Labile = unstable**]

Q. He was being treated for hypertension?

A. Yes. **Hypertension is known to be precipitated by stress**. And certainly if you have labile hypertension, stress, **lack of sleep, physical fatigue will increase your hypertension**; and that alone is a risk factor for causing dislodgement of the clot in the neck.

Then in addition to that, he was moving around, lying down for a few minutes to get a nap, getting up and looking

over the side while he was driving the wheelhouse—the wheel and to try and get to the anchors and so forth; and it's very stressful because he had no backup from the mate, that was worthwhile. **It was his sole responsibility, the captain of the ship.**

I was in the U.S. Navy—

Q. Uh-huh.

A. —and the **Captain of a ship is responsible for whatever goes on, no matter who is doing what** at the time you go aground, for example. If you say, —I was— —I was in my bunk, and somebody else was at the wheel,— that's no excuse.

**So, he had to be at the wheel when – when he felt preservation of the boat was necessary.**

And I have references that I brought with me published in Stroke on the fact that is well-known to us stroke doctors that **stress does play a part causation of stroke.**

Q. Okay. I think we went far a field from my original question, though, on the last one.

The specific question was: Do the medical tests that were run and the scans that you have and the echocardiogram or the EKG, any of the medical records show that what you believe to have been embolic event, you can look at that and say that was fatigue as opposed to just high blood pressure or stress as opposed to just high blood pressure?

A. I would say that the echocardiogram, the contrast cardiogram showing ischemia, **the fact that he had five bypasses to his coronary arteries would put him at high risk for stroke.**

#### TR 31-32

Q. My question is: Do any of the objective —the medical tests that you have lead one such as yourself to look at them and say **this stroke was caused by fatigue or stress itself?**

A. Yes.

Q. Okay. And which ones?

A. There's a likelihood far exceeding 50 percent, yes. And I am going to go through them again. You're not going to like it; but if you look at an abnormal electrocardiogram and if you look at a stress test that shows ischemia or the anterior/inferior myocardium, you know that that —and in a hypertension that's labile with documented blood pressure indicating and confirming labile and diastolic and systolic hypertension, then you know that person is liable to have a stroke and that stress is going to make it more liable to have one and that —furthermore, that **stress is a published risk factor for stroke independently; but in combination, stress – in combination with other risk factors –will make it highly likely.**

Q. Okay. In Mr. Verret's class case do you have any medical records or studies that document a stroke a condition in him that say —that lead you to conclude, apart from any risk factors that we all agree are risk factors for stroke —that **you can point to and say that – that particular finding there is caused in his case by stress or fatigue?**

A. Yes.

Q. Okay. What would that be?

A. I've gone through them. Here you'll find that there are three references in Stroke, which is an outstanding journal,

American Heart Association, and which I've been an educator and published many things. And I would say that **stress is an independent risk factor.** It's well-known that **as you add one risk factor after another for stroke, the probability of stroke goes up geometrically.** Now, I believe I've answered your question.

Q. Well, I think you're saying, if I'm correct, that **stress is a risk factor for stroke?**

A. Right.

#### TR-34

A. Yes, you listed it. You said when —when stress is added onto risk factors for stroke. It is a risk factor for stroke. And I'm trying to answer your question.

Then all the other evidence that's overwhelming in the chart of all the other risk factors for stroke would mean that, since I've told you from the Framingham study, it's absolutely common knowledge that **as you add one risk factor on top of another, you increase in likelihood of a stroke;** and I've been through it over and over again on all the risk factors.

#### TR-53

Q. Do you have an understanding in this case whether Mr.—Captain —was found conscious or unconscious?

A. He was not responding and the —the I'm trying to get the right words. The mate in training did get from him that he felt sleepy and got a pillow and felt he was doing him a favor by having him sleep but —and that went on, I think, for six hours and that's kind of a disaster.

The answer to your question is that if somebody collapses and you're a layman, you ought to immediately get the equivalent of emergency medical services in, and if you're abroad a ship, then you have the captain or the communications —this happens to be the captain; so, you get on the telephone and call

#### TR 64-66

Q. This fatigue that you mention in your testimony today and that you refer to in your written report from working excessive hours —that we're all —that lawyers work for a lot of hours. I know doctors work even more. What do you consider an excessive —**what are you assuming in this case is – that Captain was working an excessive number of hours per day?**

A. I'm going to answer that from several different aspects. I have been informed that the Coast Guard will not accept working over 12 hours. I am also informed that 12 hours usually is broken down so that it's not continuous. I think that probably it's less —that is my opinion based on medical evidence I'm getting into a minute. **I think probably a 12-hour shift is less stressful, continuous 12-hour shift, 12 hours on 12 hours—than broken down.**

The information I have for both doctors and nurses following —and there's right now litigation laying down of —of rules according to Federal Government, I believe, of nurses now is that they also are not —they're prohibited from working longer than 12 hours a day. And they did the same thing with interns and residents in training sometime ago in New York. **They found that the incidents, both for nurses and doctors – the incidents of accidents, the incidents of deaths, and**

**mortality rates in hospitals could be correlated with the hours worked.** When people were overworked, there were more medical errors and more fatal errors in the hospital. That's why they made the difference, made the rules.

I don't know if I've answered your

Q. Well, I understand what you're saying; but let me ask the question this way: Have you seen any evidence in this case from either medical records or testimony that indicates Captain Verret worked in excess of 12 hours at any time during this hitch he served aboard the vessel with the mate?

A. It's my impression that he was, and it's also my impression that **he was sleep deprived.** And in neurology we know a lot about sleep because it's a subdivision of expertise of which I've written several papers on sleep. And **sleep deprivation leads to a number of brain dysfunctions.** When you have there are stages of sleep where there's dreaming; and there's four stages of sleep, which stage four is sort of sleeping like in coma, very deep sleep. And when you're sleep deprived, you spend more time in deep sleep and less time in dreaming and stuff; and **you begin to have unclear thinking as a result of that, including hallucinations.**

#### TR 68-69

Q. And are you similarly making that assumption that he was working in excess of 12 hours per day on a day-in and day-out basis while working with this mate?

A. That's a very difficult question because it sounds like every day of the week was he working more than 12 hours. I didn't say that.

Q. Okay. Is it your assumption he was working more than 12 hours on more than one day of this hitch?

A. Yes.

Q. Okay. And that, too, would be basis for your opinions?

A. It wouldn't be the basis

Q. That knowledge.

A. It would be the basis for part of the stress that he was under not total.

Q. Is there a certain hour that you're referring to as being overworked, somewhere between that you're saying you're assuming he's worked over 12 hours on

A. Yes.

Q. Days? Is there a certain number that you're talking about when you're talking about when you're saying he's working

A. No

Q. How long hours?

A. No

Q. 24?

A. No magic hour. Just that **continuous working for more than 12 hours is stressful, and I've given you evidence form the medical – nursing profession. I also would say—and this is something I myself have known if you're not sleeping well because of concerns you're conducting your ship, that would be stressful too even though you're lying in bed.**

#### TR-85

A. I would say **he was highly unlikely to have a stroke under those circumstances if you took stress out.**

#### TR 90-95

Q. (Mr. Riviere) Dr. Weir indicated that he is aware of no studies that show that fatigue alone is a cause of occlusion of

right internal carotid arteries. Would you agree with that?

A. Given other factors – namely, this atherosclerosis and systemic atherosclerosis, widely disseminated atherosclerosis in the brain – and the he has all these other risk factors, **I would think that stress arising from fatigue would be an additional independent risk factor.** And from the studies that have been done at the Framingham study and published in Stroke, that **the more and more risk factors you pile up on an individual, the greater the likelihood of having a stroke.**

Q. Okay. What about the greater likelihood of causing occlusion to build up in an artery? Does fatigue cause that?

A. I think that's what we're talking about.

Q. Well, it causes strokes is what you were saying; but does the build up – is the build up of plaque caused by fatigue?

A. The thrombosis, I think – is **all these risk factors contribute to the eventual thrombosis on the plaque.**

Q. What does thrombosis mean?

A. A **blood clot** – if I might back up just a minute, I have a picture in – in my textbook of medicine textbook of neurology; but it is hardening of the arteries at the origin of the carotid artery in the neck, internal carotid artery, which is the second most common site of atherosclerotic plaques, the first being the heart, including the aorta. And, so, the incidence of coronary artery disease is higher than that for stroke; but they run very close.

And when that plaque has a thrombus on top of it, that's a blood clot; and the reason the blood clot forms is because it's highly irregular. The wall of an artery is covered by smooth endothelium, and blood clots don't – all the time blood is going by. It doesn't stop and clot. But when you've got plaque that's irregular, then it will form; and you mentioned earlier on if it has hemorrhage into it, that could be another cause of worsening of the plaque and even a thrombus on top of it.

Q. Okay. The thrombus and the – hemorrhaging of plaque aside, **does fatigue cause the mere buildup?**

A. **Certainly. I think fatigue and stress and blood pressure fluctuations. No question about it.**

And, by the way, movement of the neck is another thing; and apparently this man was moving around quite a bit.

Q. Can you refer to any particular study that indicates that fatigue causes plaque to build up, not to hemorrhage or to thromboses, but to build up over time?

A. **I can point to studies that show hypertension causes atherosclerotic plaques in the internal carotid artery.** And I can show you studies that say that **stress makes blood pressure elevations more frequent.** I can give you, as I did already, two or three articles discussing the fact that stress can – cause a stroke as one of the risk factors for stroke.

I'm sorry. But putting all those together to me, answers your questions.

Q. I understand what you're saying, Doc. Let's take a physician. Let's – if a physician is under stress, even though he's working just like every other physician in the hospital, would that – would that same process be the same that you're referring to if this physician is stressed, although he is

working normal doctor hours, that this plaque's going to build up, his blood pressure is going up, he might throw an embolism, he might have a hemorrhaging of plaque is that accurate?

A. I've take care of, I think, dozens of physicians who've had just that history.

Q. Uh. Huh. So I'm understanding what you're saying based upon the way I repeated it?

A. Yes.

Q. Okay.

A. It happens to physicians all the time.

Q. And it may not be a physician who's working differently than every other physician. If if that person's under stress, then he may have this process ongoing internally?

A. I'm not sure-- I understand the question?

Q. Yes.

A. Sounded to me like a statement.

Q. Is it a correct statement?

A. You'd have to repeat it.

Q. Okay. Let me let me ask let me let me ask this first: **Do individuals experience stress at different levels?**

A. Yeah.

Q. **For example, an underworked person may have more stress than another person who handles stress well?**

A. Yeah.

Q. For example, an underworked person may have more stress than another person who handles stress well?

A. Yes.

Q. Okay.

A. **Work is not the only cause of stress.**

Q. Uh-huh.

A. Plenty of housewives are not working and are under terrible stress. Let's say hypothetically the same person other than stress. **One has more stress although he's doing the exact same work, same working hours and just dissipates stress poorly than this next individual.**

A. Yeah

Q. This is the process that would be going on in the stressed person, that he would be building up plaque; and at some point he could throw an embolism?

A. Yeah. And also coronary arteries.

Q. All right.

A. His blood pressure. Yeah. Yeah. What you said is very well-known

Q. Uh-huh.

A. **that there's tremendous individual variation in their response to stress. And of course, some people doing the same work are very happy doing that work and have no stress whatsoever; and other people find it very stressful.**

#### TR 101-102

Q. All right. And of course your knowledge of the different risk factors and, again, we certainly the lawyers will debate the degree of stress, the degree of fatigue, et cetera; but certainly the mechanism given the history that we've asked you to assume, would be that **this gentleman was under stress, was under fatigue, had sleep deprivation, that mechanically speaking worsened his hypertension,**

**raised his blood pressure and that mechanically is the mechanism that would cause breakaway of this blood clot from the carotid artery going up to the cerebral?**

A. Yes.

#### TR 104-105

Q. Okay. Would the doctor and I don't know if you have looked at these in detail and they may not bear any of any major differences, but would prior EKG's contrast in any way, meaningful way, with the EKG studies done at Lake Charles Memorial?

A. No.

First of all, to confirm what I'm saying is that if the internist's workup had found something such as worsening of the EKG, which there wasn't, by the way I looked at it and he did do a contrast echocardiogram using a dye and he showed the old infarct but nothing new and that it had been bypassed so now, **this is a very important point because if he had found something such as progression of his heart disease, he would not have allowed him to be a captain of a tugboat, because the Coast Guard have their rules.**

Q. Uh-huh.

A. And I remember you remember they asked for more records from him saying that **he had a history of this heart disease and they wanted proof, please, that it isn't progressive.**

Q. Okay.

A. And he said it wasn't.

Q. Right.

Now again I asked you to assume that he had these two two pre-stroke workups in the six months of this event and so Dr. Henry ruled out the fact it wasn't progressive. If you if you're asked to assume that to put on top of that this work scenario that you've been asked to assume, would that be important in your opinion?

A. No. I think, if anything, the previous studies confirmed everything I said.

#### TR 109-111

Q. **Do you have any opinion as to whether the right internal carotid artery was severely occluded as of his Coast Guard examination in October?**

A. **In my opinion it was not.**

Q. Okay. And what do you have an opinion as to what degree of occlusion?

A. Well, we don't know because he wasn't examined

Q. Uh-huh.

A. So and, therefore, it's just my opinion and so

Q. Okay.

A. It's

Q. **What do you have an opinion as to what caused it to become more severely occluded between October and December?**

A. Because atherosclerotic plaques do progress usually; and then **under the stress of the situation we've been discussing here today, which this lawsuit is concerned, in my opinion**



**that was the thing that triggered the stroke.**

Q. Why do you think why does arteriosclerosis plaque progress? What's the medical reason on that?

A. The biggest cause is hypertension and a great number of studies have been done which show that if you do ultrasounds of the carotid, which is noninvasive test, and you control the blood pressure, the plaques will not get any larger, may even get smaller. That's been done. **If you don't treat hypertension, then gradually it will get larger as will the disease of the brain vessels and the –**

Q. Do you recall from the medical review if Mr. Verret had had treatment for high blood pressure since before his 1982 cardiac event?

A. Now, I didn't understand the question. Are you asking before he had his triple bypass had he been on any?

Q. I think it was five vessels but?

A. Five.

Q. Yeah. Was he being treated for hypertension. I don't know whether he's been treated. I think not.

Q. Okay. Was he treated from that time going?

A. Yes.

Q. So forward?

A. **He was told to quit smoking.**

Q. **Can we agree that the length of ongoing hypertension contributes to arteriosclerosis disease?**

A. Yes.

## CASE #2: CAPTAIN LARRY GWIN

I am 51 years of age. In March 2003 I was diagnosed with a high stress level. I was not aware of what was happening to me at the time except that something was not right.

At the time, I was serving as Master of one of the largest towboats on the inland waterways. For five years, I had been responsible for safely navigating 40 barges from Cairo, Illinois to New Orleans, Louisiana.

I am normally a cheerful person and in good health. However, I first noticed signs of illness starting with flu-like symptoms. I seemed to catch just about any cold or illness I came in contact with, although mostly colds.

Other things began to happen in regard to my life at home shortly after my wife was injured at work. Her injury required surgery. At the same time my company started pressuring me to move more than 40 barges down river. The company repeatedly asked me to move six to eight **additional barges** each trip and offered a bonus to do so. However, I rejected this offer and turned down their requests to push more barges each time I was asked to do so because **I considered it unsafe to do so.**

From the beginning, I was told that moving more than 40 barges down river was strictly voluntary although somehow I really knew in my mind that this pressure was more of a demand than simply asking me to volunteer. After rejecting my company's requests because I believed the movements were unsafe, my regular job evaluations started to decline after four years of excellent evaluations. This bothered me

because I always ran a good, clean, well-disciplined vessel and succeeded in safely moving tows up and down the river as required.

I began to notice subtle changes that I passed off as part of simply growing older. Although this is my chosen profession, I reached the point when I would board the boat for my tour of duty and find that I really did not want to be there. After about two weeks into my tour I would start feeling sick, fatigued, depressed and found it increasingly difficult to get to sleep. Because the new company evaluations indicated that I was not keeping up with my towboat's arguable potential to push over 40 barges, I began to wonder if and then when the company would replace me with an individual who was willing to take the risk of moving up to 48 barges downstream.

Then I discovered that my wife's injury was more serious than originally reported. Since I consider myself to be a strong-willed person, I determined to toough it out.

When I got off duty all I wanted to do was lay around. When I got home, all I wanted to do was to stay at home. I began getting short with my wife even though she was suffering and continues to suffer with painful and debilitating injuries. I also began to display short temper with others both on and off the job without even realizing what I was doing.

After a while, my wife finally suggested that I see a doctor.

Following her advice, I made an appointment to see my physician. We sat and talked about dieting. I said I was trying but it is hard to exercise on the boat in light of the sedentary nature of the job and its long hours. My wife then said something, and I must have gotten short with her in front of the doctor.

The doctor then asked my wife to leave the room for a few minutes. After she left, the doctor started asking me about my marriage, my work, my home life, etc. in great detail. I explained that I felt pressured at work and consistently refused to do what I felt was unsafe.

After further discussion with the doctor, he instructed me to go right over and take an echo stress test because he believed I was highly stressed.

I took the echo stress test. The Cardiologist that gave the test, monitored me as I went through it. He told me that the ultra sound test showed my heart valves were in good condition. My blood pressure was elevated but there seemed to be no noticeable blockage. I went back to my doctor who confirmed his diagnosis and started me on stress medication.

The doctor and I talked about stress. He told me that **stress is a silent killer that most people don't even know that they have it.**

Since being diagnosed with stress and after my talk with the doctor, I began to notice other heavy tow Captains and Pilots who said they don't want to be here or that they were tired and just continue to go on. I have become more conscious of heavy smoking, of some Captains who drink heavily, and also of marked attitude and appearance changes. By attitudes I mean these men are mad at the world one minute and appear quite content at other times. By appearance, I noticed weight gain, hair turning color faster, or the look of faster aging.

Since my first visit with my doctor, I have been required to take medication, even after I was terminated after working with the same company for five years. This was an extremely stressful event in itself. I made a conscious effort to slow my life down, and have now learned to take life one day at a time.

Since this is my story, and my eyes were first opened to stress and its effects, it is only reasonable to express my concern and record observations about the mariners I worked with for the past five years and consider the feelings they must experience on the job and simply did not recognize.

I can think of eight licensed officers working for the company I used to work for that experienced the same kind of stress that I experienced. I will identify them only by their first names to protect their full identities. Many are my personal friends; others are only passing acquaintances. Some still work for this company pushing heavy tows; while others do not. Since I am writing this without access to any medical records, there may be some inaccuracies:

**HOW STRESS AFFECTS MARINERS  
I WORKED WITH**

1. **Jasper** was a licensed river Pilot and a longtime personal friend of mine who is now deceased. We were constantly in touch with each other. Since he was not aware that he had a health problem, I was surprised when he told me that doctors had discovered a blockage and performed balloon angioplasty.

After this procedure and medical counseling about stress and its effects, he warned me that he believed the stress from continuing to push heavy tows would kill him.

Jasper was an excellent Pilot. However, he could not read or write very well. He told me that the company told him that he would never be promoted from Pilot to Captain because of his educational deficiencies. However, the company pressured him to push their oversized tows indicating that he could be laid off if he did not do so.

Jasper was afraid he would be fired. He made one more trip after his angioplasty. After he returned to work, he had to go to the hospital, underwent heart bypass surgery and died in the hospital.

2. **Mike** was one of the original towboat pilots who agreed to push oversize 66-longö (i.e., 1,200-foot long) tows for the company. He made three or four trips and had several

accidents that, by themselves, are stress-inducing events. One accident damaged a barge below the upper Memphis Bridge.

Following the accident, he was taken off the boat with chest pains and underwent triple bypass surgery. He returned to work and tried pushing 66-longö tows again. He climbed the hill with one tow and was removed from the boat. He is now retired on long-term disability.

3. **Junior** at first declined to push oversize 66-longö tows but claimed the company pushed him to do so. He lasted for about 6 to 8 months and is now retired on long-term disability. The Coast Guard would not renew his license.

4. **Toby** was hired after I left the company. He reportedly took and failed a company physical because of heart trouble. He was rushed to the doctor and had triple-bypass surgery. When he returned to work, the company put him on an oversize 66-longö tow apparently without considering the stress involved in handling so many barges on the Lower Mississippi River.

5. **Robert** recently rode the boat with me. We discussed his health. He has had two heart attacks, one of which occurred on the boat.

After his first heart attack, he made two trips and had to be taken off the boat with chest pains and had a heart attack in the taxicab taking him off the boat.

The last time I spoke with him he was still pushing 66-longö 46-barge tows on the M/V ■■■. His Cardiologist recently told him to take an extra week off work because of high blood pressure. He was moved from an 8,400 hp towboat to a 10,500 hp towboat and is expected to push tows up to 46 barges southbound and an even larger number northbound.

6. **John** has had two strokes on the boat. He hit the bank with one tow, was taken off the boat, went back again and had a second stroke.

7. **Mark** was one of the original 66-longö 48-barge tow pilots. He made one trip and retired with long-term disability.

8. **W.O.** was a heavy tow pilot when I started working for the company who committed suicide a number of years ago.

**Appendix 1  
Pilot Deaths Compiled by the American Inland Mariners Association (AIM)**

	Pilot's Name	Approx. Age	Approx. Year of Death	Known Cause of Death	Smoker Yes/No	Approx. Weight
1	Bechard, Oscar "Yank"	55	1997	Cancer		
2	Hine, C.	61	1994	Cancer		
3	Dismore, D.	?	1990	Heart Attack		
4	Evans, Danny	51	1997	Heart Attack	Yes	200
5	Rusk, Carl C.	75	1996	Cancer		
6	Hines, Terry W.	55	1997	Cancer		
7	Pierce, Delbert	60	1994	Aneurysm		

8	Baker, John	57	1997	Heart Attack		
9	Griffin, John	50	?	Heart Attack		
10	Williams, David	56	1996	Heart Attack		
11	Hail, Harley, Sr.	65	1996	Heart Attack		
12	Grubbs, Wade	67	1996	Heart Attack		
13	Patronas, Walter	60	1995	Heart Attack		
14	McTeir, Louis	60	1995	Heart Attack		
15	Womack, John	60	1994	Heart Attack		
16	Presley, James	53	1994	Heart Attack	Yes	240
17	Robinson, Cory	55	1994	Heart Attack		
18	Clark, "Dutch"	70	1994	Cancer		
19	Bowermaster, Ed	65	1994	Heart Attack		
20	Odeo, Fred	48	1997	Cancer		
21	Wilcox, Paul	48	1996	Brain Aneurysm	Yes	
22	McEntire, W.O.	55	1996	Suicide	Yes	230
23	Davis, Cleo	50	1996	Complication in Surgery		
24	Salter, Red	60	1996	Heart Attack		
25	Rogers, Clyde, "Sticky Daddy"	60	1993	Heart Attack/Auto Accident		
26	Greggor, Gill	55	1995	Asphyxiated/paint fumes		
27	Lambert, Dorman	62	1990	Heart Attack		
28	Coyle, Mallory "Red"	65	1995	Cancer		
29	Crawford, "Shorty"	56	1990	Heart Attack		
30	Flenner, Kenneth	55	1991	Heart Attack		
31	Fridell, Max	63	1997	Cancer	Yes	
32	Gibson, "Hoot"	54	1992	Heart Attack		
33	Golding, "Curley"	70	1996	Heart Attack		
34	Gibson, "Jr."	65	1994	Heart Attack		
35	Kelly, Hillard	50	1994	Heart Attack		
36	Lintom, Jim	45	1992	Brain Cancer		
37	McAfee, Tommy	55	1993	Heart Attack		
38	Newcome, "Dude"	55	1995	Cancer		
39	Robertson, Dewey	48	1994	Heart Attack		
40	"Big Red" @ ACBL	?	1992	Heart Attack		
41	Rice, "Jr."	63	1996	Heart Attack		
42	Stone, "Rooster"	?	1992	Heart Attack		
43	Qualls, Mickey	60	1993	Heart Attack		
44	Tate, Mace	75	1996	Cancer		
45	Tinsley, Ted	67	1993	Heart Attack		
46	VanWaggner, Frank	67	1995	Cancer	Yes	
47	White, Chuck, Jr.	60	1993	Heart Attack		
48	Sayer, Jim	60	1994	Heart Attack		180
49	Franklin, John D.	68	1997	Extended Illness?		
50	Barfield, Charles	56	1996	Heart Attack		
51	Bradley, Don	58	1995	Burned on the Vessel		
52	Bryant, M.S. "Dewey"	6	1996	Heart Attack		
53	Carol, Doris, "Jr."	62	1990	Aneurysm		
54	Day, Kenny	55	1992	Cancer		
55	Goff, Floyd	48	1996	Drowning		
56	Middleton, Paul	63	1996	Cancer		
57	Sauls, James "Jimmy"	53	1995	Heart Attack		
58	Littlepage, Billy Joe	?	1993	Heart Attack		
59	Scaggs, Archie	55	1993	Heart Attack		

60	Long, Cody	60	1990	Heart Attack		
61	Smith, Billy	41	1992	Killed on the Job		
62	Harrel, "Buddy"	42	1995	Heart Attack		
63	Tigue, Donald	56	1996	Heart Attack		
64	Wallace, George	38	1997	Heart Attack		
65	Keen, Charles	62	1994	Stomach Cancer		
66	Walter, ?	64	1995	Heart Attack		
67	Bugh, Harry	61	1993	Cancer		
68	Stallings, Frank	55	1995	Heart Attack		
69	Lang, Clyde	56	1996	Heart Attack		
70	Williams, Glen	52	1996	Heart Attack		
71	Bates, Cleon	48	1993	Heart Attack		
72	Klienpeter, J.B.	77	1997	Heart Failure		
73	Hammett, Robert, "Roddy"	35	1995	Murdered		220
74	Swider, Jimmy	48	1993	Heart Attack	Yes	160
75	Navarra, Don	52	1995	Cancer	No	300
76	Hayles, Dale	45	1992	?		
77	Robinson, Coy	50	1995	Heart Attack		
78	LaBlanche, Johnny	58	?	Heart Attack		
<b>TOTAL 4224 ÷ 74 = 57.08 years</b>						

### Appendix 2

#### Additional Pilot Deaths Compiled by the Gulf Coast Mariners Association (GCMA) 1997 to 2004

	Pilot's Name	Approx. Age	Approx. Year of Death	Known Cause of Death	Smoker Yes/No	Approx. Weight
79	Dunnoway, Grady	74	1999	Heart Failure		
80	Poole, Larry	43	1999	Cancer		
81	Smith, Alfred	71	2000	?		
82	Thompson, Robert	61	2000	Heart Attack		
83	Duly, Ernest	63	2000	Natural Causes		
84	Marks, Jesse	83	2000	?		
85	Haley, Robert	69	2000	?		
86	McArthur, Wilber	71	2000	?		
87	Parfait, Robert	64	2000	?		
88	Andrews, James	73	2000	?		
89	Ingram, Benjamin	56	2000	?		
90	Manchester, Billy	65	2000	Cancer		
91	Carpenter, Herbert Jr.	70	2000	?		
92	Hyer, Leroy	77	2000	?		
93	Hebert, Wayne	57	2000	Liver Cancer		
94	Ballard, Danny	45	2000	Heart Failure		
95	Easter, Alfred	88	2000	?		
96	De Perrodil, Gary	33	2000	Heart Attack		
97	Turner, Arthur	72	2000	?		
98	Kersh, Matthew	35	2000	?		
99	Fayard, Donald	46	2000	Heart Attack		
100	Sprinkle, James	69	2000	Heart Failure		
101	Cunningham, William	79	2000	Lung Cancer/Diabetes		
102	Romino, Randy	44	2000	Heart Failure		
103	Wood, Victor	86	2000	Heart Failure		
104	Vickers, James	86	2000	Heart Failure		
105	Bailey, Jack	65	2001	?		

106	Peck, David	48	2001	?		
107	Cooper, Lee	70	2001	Heart Attack		
108	Middleton, Al	47	1998	Heart Attack		
109	Lewis, Micheal	?	1998	Heart Attack		
110	Schickling, Lester	75	1997	Cancer		
111	Jones, James Donald	74	1998	?		
112	Rustin, C.W.	85	1998	?		
113	Weinmenin, Gerald	60	1998	Cancer		
114	Brack, Raymond	67	1998	Heart Attack		
115	Chaser, Jack R.	67	1998	Heart Attack		
116	Lyle, Lesh	72	1999	Liver Cancer		
117	Stein, William	76	1999	?		
118	Shaerer, George	73	1999	Stroke		
119	Still, William	31	1999	Pulmonary Edema		
120	Rome, Robert	58	1999	Cancer		
121	Clement, Clifford	63	1999	?		
122	Catlou, Albert	77	1999	Stroke		
123	Schletker, Robert	78	1999	Heart Attack		
124	Moves, Stanley	47	1999	Cancer		
125	Thompson, Kevin	26	1999	Ashtma Attack		
126	Sauerwin, Lucas	70	1999	Heart Failure		
127	Riley, Russel	53	1999	?		
128	Reid, George	?	1999	Prostate Cancer		
129	Murphy, James Sr.	63	1999	Heart Attack		
130	Berry, Robert	74	1999	?		
131	Memims, Parrell	76	1999	Cancer		
132	Dailey, Jeff Jr.	62	1999	Pneumonia		
133	Caulkin, Joseph	34	1999	Accident-Fell Overboard		
134	Bishop, Mark	85	1999	?		
135	Little, Howard	71	1999	?		
136	Jamison, Ted	80	1999	?		
137	Jackson, Gordon	55	2001	Heart Attack		
138	Holder, Eugene	68	2001	?		
139	Ehrler, Mike	43	2001	Motorcycle Accident		
140	Scoggins, Paul	62	2001	?		
141	Stein, David	?	2001	?		
142	Calwell, Robert	46	2001	Heart Attack		
143	Garland, Howard	94	2001	Natural Causes		
144	Melber, Tommy	54	2001	?		
145	Raines, Michael	51	2001	?		
146	Cantrell, Ronald	52	2001	Unknown Causes		
147	Fisher, Gregory	49	2001	?		
148	Hardin, Tommy	55	2001	?		
149	Roberts, Tim	69	2001	Emphysema		
150	Ranson, Jack	63	2001	Long Illness		
151	Hunter, James	95	2001	?		
152	Babin, D.J.	73	2002	?		
153	Griggs, Archie	74	2002	?		
154	Berisford, Jack	66	2002	Natural Causes		
155	Ferguson, Jack	63	2002	Cancer		
156	Young, Danny	46	2002	Died in Sleep		
157	Hartley, Joseph	54	2002	Automobile Accident		

158	White, Donny	74	?	?	
159	Allen, Robert	?	2002	?	
160	Davis, Richard	66	2002	Extended Illness	
161	Barrios, James	57	2002	Heart	
162	Kennison, Willie	78	2002	?	
163	Burton, Charles	54	2002	?	
164	Sackberger, Lewis	74	2002	?	
165	Thomas, Sid E.	76	2002	?	
166	Wizba, Joseph	77	2002	?	
167	Hickman, Lewis	?	2002	?	
168	Moore, Dan	63	2002	Stroke Complications	
169	Lewis, Harry	?	2002	?	
170	LeCompte, Ray	63	2002	Lengthy Illness	
171	Bryant, Jasper	54	2002	Open Heart Surgery	
172	Owens, Larry	61	2002	Cancer	
173	Walker, Edward	62	2002	Pneumonia/Heart Attack	
174	Simkins, William	74	2002	?	
175	White, William	?	2002	?	
176	Lewis, Earl Jr.	88	2002	?	
177	Price, Jackie	63	2002	?	
178	Theriot, Lee Jr.	46	2003	Cardiac Arrest	
179	Humphrey, Richard	56	2003	Aneurysm/Aorta	
180	Payne, Ronnie	54	2003	?	
181	Gralopp, Lawrence III	60	2003	?	
182	Zimmerman, Vernon	67	2003	?	
183	Mehclik, Paul	53	2003	?	
184	Wilhite, Stanley	48	2003	?	
185	Brace, Edison	83	2003	?	
186	Eschete, Joseph Sr.	53	2003	Colon Cancer	
187	Honor, Curtis Taylor	59	2003	Heart Attack	
188	Simpson, John (Russell)	69	2003	Heart Attack	
189	Lyons, Frank	74	2004	?	
190	Stann, Roy	72	2004	Cancer	
191	Anderson, James Sr.	59	2004	Heart Attack	
192	Freeman, Charles	64	2004	?	
193	Arndd, Carl	67	2004	?	

**APPENDIX 3**

*[Acknowledgement and Credentials: Steve Burns, M.D. is a graduate of U.C.L.A. Medical School. He has been a practicing physician since 1974. Originally trained in Emergency Medicine, his practice for the last two decades has been focused upon the issues of Urgent Care and Occupational Medicine. He has been the medical consultant for more than 800 companies in the Southern California area, helping them deal with issues of worker health and safety. In that time period he has treated over 125,000 persons for personal or work related illness. Dr.*

*Burns is married to Kimberly Burns. She prepared the illustrations. The information presented below appears on their website:*

<http://www.teachhealth.com/dealwith.html>

*Steven L. Burns is the author of the book titled How To Survive Unbearable Stress, ISBN 0-933131-02-X. The following disclaimer appears on his website: "Our mission is health education, particularly at a high school and college level. This is NOT medical advice. For help with a personal health concern, please consult your qualified health care provider."]*

**The Medical Basis of Stress, Depression, Anxiety, Sleep Problems, and Drug Use**

2nd  
Edition!

health - psychology

How To Survive

# Unbearable STRESS



Steven L. Burns, M.D.

illustrated by: Kimberley Burns

## CONTENTS

### Recognizing Stress

Most people are exposed to much higher levels of stress than they realize.

### Your Stress Scale

A self-test you can use to determine how much stress you are really facing.

### Brain Chemical Messengers

Brain cells "talk to each other" by means of chemical messengers. When a person is exposed to too much stress, chemical communication in the brain begins to fail. When these messengers fail, a person suffers from sleep disturbance, aches and pains, depression and anxiety. This condition is called -- OVERSTRESS.

### Three Happy Messengers

Three brain messengers control your sleeping, your energy levels, and your feelings of pain and pleasure.

### Pick-Me-Up's

Chemicals from the grocery store shelf, as well as drugs, can temporarily restore your brain messenger function -- but not completely, and not for long. These substances are called "Pick-Me-Up's." Pick-Me-Up's are the WRONG way to handle overstress.

### Stress Tolerance: Patterns of Inheritance

OVERSTRESS runs rampant in certain families. Studies have shown that a person's stress tolerance is determined by his inheritance.

### Pick-Me-Up Rebound

How the use of Pick-Me-Up's causes your sense of well-being to ride a wild up-and-down roller coaster.

### Put-Me-Downs

People on this roller coaster become desperate for anything that can make them feel better. They often resort to the use of chemicals called Put-Me-Downs", either prescribed by their doctor, or obtained illegally.

### Treatment of OVERSTRESS

Ten simple steps you can follow at home to feel better, and stay that way. Where to go if you need a little extra

help in handling your stresses. Three rules to permanently conquer OVERSTRESS.

### Checklist for Handling Overstress

It's as easy as checking off the boxes.

### Epilogue

The levels of stress in our society will only increase. It is important for each of us to learn to deal with stress now.

### Acknowledgement

### Recognizing Stress



### Which of these is stress?

- You receive a promotion at work.
- Your car has a flat tire.
- You go to a fun party that lasts till 2:00 a.m.
- Your dog gets sick.
- Your new bedroom set is being delivered.
- Your best friend and his wife come to stay at your house for a week.
- You get a bad case of hay fever.
- All of the above.

### ALL OF THESE ARE STRESS

If you are used to thinking that stress is something that makes you worry, you have the wrong idea of stress. Stress is many different kinds of things: happy things, sad things, allergic things, physical things. Many people carry enormous stress loads and they do not even realize it!

### WHAT IS STRESS?

We are all familiar with the word "stress". Stress is when you are worried about getting laid off your job, or worried about having enough money to pay your bills, or worried about your mother when the doctor says she may need an operation. In fact, to most of us, stress is synonymous with worry. If it is something that makes you worry, then it is stress.

Your body, however, has a much broader definition of stress. TO YOUR BODY, STRESS IS SYNONYMOUS WITH CHANGE. Anything that causes a change in your life causes stress. It doesn't matter if it is a "good" change, or a "bad" change, they are both stress. When you find your dream apartment and get ready to move, that is stress. If you break your leg, that is stress. Good or bad, if it is a CHANGE in your life, it is stress as far as your body is concerned.

Even IMAGINED CHANGE is stress. (Imagining changes is what we call "worrying".) If you fear that you will not have enough money to pay your rent, that is stress. If you worry that you may get fired, that is stress. If you think that you may receive a promotion at work, that is also stress (even though this would be a good change). Whether the event is good or bad, imagining changes in your life is stressful.



Anything that causes CHANGE IN YOUR DAILY ROUTINE is stressful.

Anything that causes CHANGE IN YOUR BODY HEALTH is stressful.

IMAGINED CHANGES are just as stressful as real changes.

Let us look at several types of stress -- ones that are so commonplace that you might not even realize that they are stressful.....

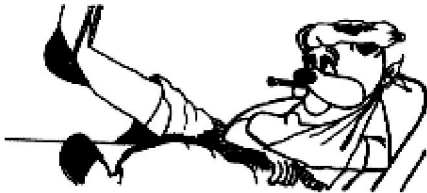
### Emotional Stress

When arguments, disagreements, and conflicts cause CHANGES in your personal life -- that is stress.



### Illness

Catching a cold, breaking an arm, a skin infection, a sore back, are all CHANGES in your body condition.



### Pushing Your Body Too Hard

A major source of stress is overdriving yourself. If you are working (or partying) 16 hours a day, you will have reduced your available time for rest. Sooner or later, the energy drain on your system will cause the body to fall behind in its repair work. There will not be enough time or energy for the body to fix broken cells, or replace used up brain neurotransmitters. CHANGES will occur in your body's internal environment. You will "hit the wall," "run out of gas". If you continue, permanent damage may be done. The body's fight to stay healthy in the face of the increased energy that you are expending is major stress.

### Environmental Factors

Very hot or very cold climates can be stressful. Very high altitude may be a stress. Toxins or poisons are a stress. Each of these factors threatens to cause CHANGES in your body's internal environment.



### The Special Case of Tobacco Use

Tobacco is a powerful toxin! Smoking destroys cells that clean your trachea, bronchi, and lungs. Smoking causes emphysema and chronic bronchitis, which progress to slow suffocation. The carbon monoxide from cigarette smoking causes chronic carbon monoxide poisoning. Tobacco use damages the arteries in your body, causing insufficient blood supply to the brain, heart, and vital organs. Cigarette smoking increases the risk of cancer 50 fold.

Chewing tobacco or snuff is no safe haven. It also damages your arteries, and it carries the same cancer risk. (Cancers of the head and neck are particularly vicious, disfiguring, and deadly).

Poisoning the body with carbon monoxide, and causing the physical illnesses of emphysema, chronic bronchitis, cancer, and arterial damage, tobacco is a powerful source of added stress to one's life.

### Hormonal Factors

**PUBERTY** ó The vast hormonal changes of puberty are severe stressors. A person's body actually CHANGES shape, sexual organs begin to function, new hormones are released in large quantities. Puberty, as we all know, is very stressful.

**PRE-MENSTRUAL SYNDROME** ó Once a woman passes puberty, her body is designed to function best in the presence of female hormones. For women past puberty, a lack of female hormones is a major stress on the body. Once a month, just prior to menstruation, a woman's hormone levels drop sharply. In many women, the stress of sharply falling hormones is enough to create a temporary **OVERSTRESS**. This temporary **OVERSTRESS** is popularly known as Pre Menstrual Syndrome (PMS).

**POST-PARTUM** ó Following a pregnancy, hormone levels CHANGE dramatically. After a normal childbirth, or a miscarriage, some women may be thrown into **OVERSTRESS** by loss of the hormones of pregnancy.

**MENOPAUSE** ó There is another time in a woman's life when hormone levels decline. This is the menopause. The decline in hormones during menopause is slow and steady. Nevertheless, this menopausal decline causes enough stress on the body to produce **OVERSTRESS** in many women.

### Taking Responsibility for Another Person's Actions

– When you take responsibility for another person's actions, CHANGES occur in your life over which you have little or no control. Taking responsibility for another person's actions is a major stressor.

### Allergic Stress

Allergic reactions are a part of your body's natural defense mechanism. When confronted with a substance which your body considers toxic, your body will try to get rid of it, attack it, or somehow neutralize it. If it is something that lands in your nose, you might get a runny, sneezy nose. If it lands on your skin, you might get blistering skin. If you inhale it, you'll get wheezy lungs. If you eat it, you may break out in itchy red hives all over your body. Allergy is a definite stress, requiring large changes in energy expenditure on the part of your body's

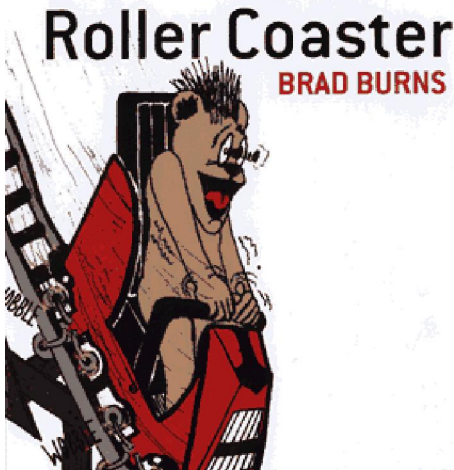


defense system to fight off what the body perceives as a dangerous attack by an outside toxin.

**Your Stress Scale**

In the following table you can look up representative changes in your life and see how much stress value each of these changes is adding to your life. NOTE ANY ITEM THAT YOU MAY HAVE EXPERIENCED IN THE LAST TWELVE MONTHS. Then, total up your score. (Adapted from the "Social Readjustment Rating Scale" by Thomas Holmes and Richard Rahe. This scale was first published in the "Journal of Psychosomatic Research", Copyright 1967, vol.II p. 214. It is used by permission of Pergamon Press Ltd.)

**THIS STRESS SCALE PRESENTED BY BRAD BURNS**



**STRESS SCALE FOR ADULTS**

STRESS	EVENT VALUE
DEATH OF SPOUSE	100
DIVORCE	60
MENOPAUSE	60
SEPARATION FROM LIVING PARTNER	60
JAIL TERM OR PROBATION	60
DEATH OF CLOSE FAMILY MEMBER OTHER THAN SPOUSE	60
SERIOUS PERSONAL INJURY OR ILLNESS	45
MARRIAGE OR ESTABLISHING LIFE PARTNERSHIP	45
FIRED AT WORK	45
MARITAL OR RELATIONSHIP RECONCILIATION	40
RETIREMENT	40
CHANGE IN HEALTH OF IMMEDIATE FAMILY MEMBER	40
WORK MORE THAN 40 HOURS PER WEEK	35

PREGNANCY OR CAUSING PREGNANCY	35
SEX DIFFICULTIES	35
GAIN OF NEW FAMILY MEMBER	35
BUSINESS OR WORK ROLE CHANGE	35
CHANGE IN FINANCIAL STATE	35
DEATH OF A CLOSE FRIEND (not a family member)	30
CHANGE IN NUMBER OF ARGUMENTS WITH SPOUSE OR LIFE PARTNER	30
MORTGAGE OR LOAN FOR A MAJOR PURPOSE	25
FORECLOSURE OF MORTGAGE OR LOAN	25
SLEEP LESS THAN 8 HOURS PER NIGHT	25
CHANGE IN RESPONSIBILITIES AT WORK	25
TROUBLE WITH IN-LAWS, OR WITH CHILDREN	25
OUTSTANDING PERSONAL ACHIEVEMENT	25
SPOUSE BEGINS OR STOPS WORK	20
BEGIN OR END SCHOOL	20
CHANGE IN LIVING CONDITIONS (visitors in the home, change in roommates, remodeling house)	20
CHANGE IN PERSONAL HABITS (diet, exercise, smoking, etc.)	20
CHRONIC ALLERGIES	20
TROUBLE WITH BOSS	20
CHANGE IN WORK HOURS OR CONDITIONS	15
MOVING TO NEW RESIDENCE	15
PRESENTLY IN PRE-MENSTRUAL PERIOD	15
CHANGE IN SCHOOLS	15
CHANGE IN RELIGIOUS ACTIVITIES	15
CHANGE IN SOCIAL ACTIVITIES (more or less than before)	15
MINOR FINANCIAL LOAN	10
CHANGE IN FREQUENCY OF FAMILY GET-TOGETHERS	10
VACATION	10
PRESENTLY IN WINTER HOLIDAY SEASON	10
MINOR VIOLATION OF THE LAW	5

TOTAL SCORE \_\_\_\_\_

### STRESS SCALE FOR YOUTH

STRESS	EVENT VALUE
DEATH OF SPOUSE, PARENT, BOYFRIEND/GIRLFRIEND	100
DIVORCE (of yourself or your parents)	65
PUBERTY	65
PREGNANCY (or causing pregnancy)	65
MARITAL SEPARATION OR BREAKUP WITH BOYFRIEND/GIRLFRIEND	60
JAIL TERM OR PROBATION	60
DEATH OF OTHER FAMILY MEMBER (other than spouse, parent or boyfriend/girlfriend)	60
BROKEN ENGAGEMENT	55
ENGAGEMENT	50
SERIOUS PERSONAL INJURY OR ILLNESS	45
MARRIAGE	45
ENTERING COLLEGE OR BEGINNING NEXT LEVEL OF SCHOOL (starting junior high or high school)	45
CHANGE IN INDEPENDENCE OR RESPONSIBILITY	45
ANY DRUG AND/OR ALCOHOL USE	45
FIRED AT WORK OR EXPELLED FROM SCHOOL	45
CHANGE IN ALCOHOL OR DRUG USE	45
RECONCILIATION WITH MATE, FAMILY OR BOYFRIEND/GIRLFRIEND (getting back together)	40
TROUBLE AT SCHOOL	40
SERIOUS HEALTH PROBLEM OF A FAMILY MEMBER	40
WORKING WHILE ATTENDING SCHOOL	35
WORKING MORE THAN 40 HOURS PER WEEK	35
CHANGING COURSE OF STUDY	35
CHANGE IN FREQUENCY OF DATING	35
SEXUAL ADJUSTMENT PROBLEMS (confusion of sexual identity)	35
GAIN OF NEW FAMILY MEMBER (new baby born or parent remarries or adopts)	35
CHANGE IN WORK RESPONSIBILITIES	35
CHANGE IN FINANCIAL STATE	30
DEATH OF A CLOSE FRIEND (not a family member)	30
CHANGE TO A DIFFERENT KIND OF WORK	30
CHANGE IN NUMBER OF ARGUMENTS WITH MATE, FAMILY OR FRIENDS	30

SLEEP LESS THAN 8 HOURS PER NIGHT	25
TROUBLE WITH IN-LAWS OR BOYFRIEND'S OR GIRLFRIEND'S FAMILY	25
OUTSTANDING PERSONAL ACHIEVEMENT (awards, grades, etc.)	25
MATE OR PARENTS START OR STOP WORKING	20
BEGIN OR END SCHOOL	20
CHANGE IN LIVING CONDITIONS (visitors in the home, remodeling house, change in roommates)	20
CHANGE IN PERSONAL HABITS (start or stop a habit like smoking or dieting)	20
CHRONIC ALLERGIES	20
TROUBLE WITH THE BOSS	20
CHANGE IN WORK HOURS	15
CHANGE IN RESIDENCE	15
CHANGE TO A NEW SCHOOL (other than graduation)	10
PRESENTLY IN PRE-MENSTRUAL PERIOD	15
CHANGE IN RELIGIOUS ACTIVITY	15
GOING IN DEBT (you or your family)	10
CHANGE IN FREQUENCY OF FAMILY GATHERINGS	10
VACATION	10
PRESENTLY IN WINTER HOLIDAY SEASON	10
MINOR VIOLATION OF THE LAW	5

#### TOTAL SCORE

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We have asked you to look at the last twelve months of changes in your life. This may surprise you. It is crucial to understand, however, that a major change in your life has effects that carry over for long periods of time. It is like dropping a rock into a pond. After the initial splash, you will experience ripples of stress. And these ripples may continue in your life for at least a year.

So, if you have experienced total stress within the last twelve months of 250 or greater, even with normal stress tolerance, you may be **OVERSTRESSED**. Persons with Low Stress Tolerance may be **OVERSTRESSED** at levels as low as 150.

**OVERSTRESS** will make you sick. Carrying too heavy a stress load is like running your car engine past the red line; or leaving your toaster stuck in the "on" position; or running a nuclear reactor past maximum permissible power. Sooner or later, something will break, burnup, or melt down.

What breaks depends on where the weak links are in your physical body. And this is largely an inherited characteristic.

**Here are the common "weak links", and the symptoms of their malfunction**

**Brain OVERSTRESS**

Fatigue, aches and pains, crying spells, depression, anxiety attacks, sleep disturbance.

**Gastrointestinal Tract**

Ulcer, cramps and diarrhea, colitis, irritable bowel.

**Glandular System**

Thyroid gland malfunction.

**Cardiovascular**

High blood pressure, heart attack, abnormal heart beat, stroke.

**Skin**

Itchy skin rashes.

**Immune System**

Decreased resistance to infections and neoplasm.

We have known for a long time that OVERSTRESS could cause physical damage to the gastrointestinal tract, glandular system, skin or cardiovascular system. But only recently have we learned that OVERSTRESS actually causes physical changes in the brain. One of the most exciting medical advances of our decade has been an understanding of how OVERSTRESS physically affects your brain. We now know that the fatigue, aches and pains, crying spells, depression, anxiety attacks and sleep disturbances of OVERSTRESS are caused by brain CHEMICAL MALFUNCTION.

**[GCMA Comment: This is only a small amount of the information contained on this website. We recommend both the website and Dr. Burns' book to our mariners.]**

**APPENDIX 4  
RECENT ARTICLES**

**Job Stress, Burnout On The Rise. Layoffs, Long Hours Taking Their Toll On Workers  
By Jane Weaver, MSNBC**

Sept. 1, 2003 -- You're doing the work of three people at your job. Some weeks you spend more time at work than at home. You missed your child's soccer game ... again. In the morning, you feel more exhausted than rested. Watch out, you may be a candidate for worker burnout.

With mass layoffs, pay cuts, seemingly endless workdays and disappearing vacations, Americans are coping with an enormous amount of job stress. Feeling unable to keep up with the demands of their jobs, many are reaching burnout levels.

In Its series on "How We Work: Punching The Clock In The New Economy," [MSNBC.com](http://www.msnbc.com) has chronicled Americans who are toiling longer and harder at their jobs. While fewer people working longer days may be good for profit-minded corporations, those increases in productivity can come at a price for Individuals.

"As the workforce has shrunk, people are overloaded and stress is the result," says Ronald Downey, Kansas State University Professor of Industrial and Occupational

Psychology. "if the stress keeps on unending, then they're in trouble."

Trouble starts when employees take on more job responsibilities, but lose their sense of control over their work. Working excessively long hours begins to take a heavy toll on family life and social relationships, adding to the stress level, researchers say.

It's well-known that stress can lead to hypertension, cardiovascular disease, heart attacks and other physical ailments, research indicates.

Early signs of job stress are headaches, short tempers, trouble sleeping and low morale, according to the National Institute for Occupational Safety and Health (NIOSH).

And it's not just physical health. An estimated 60 percent of work absences are from psychological problems at a cost of over \$57 billion yearly - according to the American Psychological Association.

"People don't have enough time to do the things they're being asked to do," says Dr. Ron Restak, an expert in brain function and author of [The New Brain](#).

Too much multi-tasking leads to distraction and a loss of concentration.

"You cannot accomplish two things at the same time as efficiently as you would if you were doing them separately. A lot of accidents and a loss of efficiency can occur from that," says Restak.

In fact, health costs are almost 50 percent greater for workers who report high levels of stress, according to the Journal of Occupational and Environmental Medicine.

"Body systems start to fall," says Downey. "Then you have stress syndrome and you break down."

**A fatal work ethic.** In Japan, It's known as "karoshi," or death from overwork.

The Japanese government has reported 10,000 cases a year of managers, executives and engineers who have died from overwork, a fallout of the country's prolonged economic slump.

It's hard to say whether it's reached that extreme In the U.S., but the number of full- or part-timers who report high job stress rose to 45 percent in 2002, up from 37 percent the year before, according to a NIOSH study. An estimated 40 percent of U.S. workers reported their job was very or extremely stressful, with 25 percent calling their jobs the number one stress factor in their lives, the organization reported.

Everyone reacts to stress in different ways and recognizing when you're reaching burnout levels can be difficult, says Dr. Jeffrey Kahn, clinical associate professor of psychiatry at Cornell.

"The most stressed-out ones don't know they're having problems," says Kahn, who is also president of WorkPsych Associates, a New York executive and corporate consulting firm. "They don't realize that things are getting to them."

Increased absenteeism isn't always a giveaway. The new buzzword is "presentism" which happens when people are too afraid to call in sick. Instead they show up, but are still too stressed-out to be productive, says Dr. Richard Chaifetz, chairman and chief executive of ComPsych, a Chicago firm which provides human resources services.

"A lot of people realize it's better to show up and be less than 100 percent productive," says Chaifetz. "But if they're not focused, their performance will go down."

**No escape.** Much of the problem comes from the blurring of the lines between work and home life, with workers tethered to their jobs through cell phones, pagers and e-mail, researchers say.

An estimated 70 percent of more than 1,500 participants felt they don't have a healthy balance between their work and their personal lives, according to a May survey on work/life balance by online job board TrueCareers.

"There are no clear demarcations anymore," says Restak. "When people left work for the day, that was it. Employers were reluctant to call them at home. Now people don't feel like they're ever off duty."

Household with two working parents or single parent households are especially vulnerable to burnout from work overload, says professor Downey.

"Before, men didn't have to worry about meals or their kids and it relieved pressure," says Downey. "Now men and women are worried about their children, if they're sick and how to get to games."

Not all job-related stress leads to burnout. For some workaholic types, boasting of burnout is an ego-booster, a macho way to feel indispensable in an otherwise bleak jobs market, say experts.

For them, "it's almost a badge of courage," says Dr. Rosch, president of the American Institute of Stress in Yonkers, N.Y. "Some people thrive in a pressure cooker and doing many things at once," he says.

**Desk slaves, free yourselves.** Even as American workers are putting in more hours, a genre of anti-work ethic books has emerged, including such publications as Work to Live: The Guide to Getting a Life, by Joe Robinson and The Importance of Being Lazy: In Praise of Play, Leisure and Vacations, by Al Gini.

Meanwhile, some corporations are making efforts to alleviate overwork by offering paid sabbaticals or on-site classes in meditation to help employees deal with long days.

"The consequence of burnout is that productivity begins to slip," says Chaifetz. "The smart organizations are the ones that can balance the needs for increased productivity with appropriate employee morale."

Jeffrey Pfeffer, professor at the Graduate School of Business, Stanford University, says American companies who want to compete in a global economy should follow the European model of shorter workweeks and month-long vacations.

"There is no evidence that excessive hours are necessary for competitive success," says Pfeffer. "But somehow we've gotten in our minds that to succeed in this world is to work yourself to death."