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COPING WITH STRESS

The following article has been reprinted, in abbreviated form, from Insight, the official newsletter of the Australian aviation Underwriting Pool. It contains some salient comments and advice for all pilots.

Poor aviation decisions are often the result of the stresses we, as pilots, come under. Stress is present in all facets of our lives, from sleep to intense work, sporting and personal situations. It can be defined as the force or pressure that makes us react, or a reaction to a challenge. Our performance is dictated by the stresses we often place ourselves under, and come in a number of forms.

Fitness, fatigue, sleep, food, age and illness determine the degree of physical stresses that dictate our performance. Psychological stresses involve our cognitive or mental reasoning and emotions. Workload, situational awareness, examinations and tests are mental stresses, while our emotional stresses relate to our personality, attitude and personal problems. Lastly, we are subject to environmental stress factors such as weather, turbulence, time and aircraft performance.

Decisions regarding external factors are inextricably associated with both the physical and psychological stresses that pilots face. The greater our preoccupation with peripheral events or stresses, the greater the threat to our primary focus, and generally these stresses cause us to take risks that would otherwise be unacceptable. The death of John Kennedy Jr, his wife and sister-in-law is now well documented, but is a stark reminder of how personal, mental and environmental stresses can accumulate with tragic results.

In anything we do, we come under some degree of stress. The amount is referred to as the level of arousal and our efficiency requires a certain amount of arousal. If it is too low we can nearly be asleep and our alertness to situations may make us miss vital signs. These may be the insidious signs that creep up on us and are not easily detected, such as slow depressurisation or carbon monoxide poisoning.

Conversely, if we overload ourselves, our performance will eventually break down. As we learn to fly, most sequences that we undertake require considerable concentration and mental effort. Our level of arousal rises very quickly, and any additional influences can

quickly tip us over the acceptable stress level and our ability to perform the expected task reduces. As we develop our skills, the tasks we undertake become less mental and more perceptual or automatic and the greater becomes our capacity to handle more complex or multiple tasks. The effort required to raise our arousal level increases with experience and if this effort becomes excessive, complacency may become a critical factor.

In aviation, stress varies considerably with the type of flying we do. The stresses associated with low flying such as in aerial agriculture or in helicopter rescue operations will be far greater than in normal passenger charter operations because the room for error is substantially lower on the first two types of operations. In agricultural operations, it is not surprising to find many accidents occurring to highly experienced pilots. As the flying becomes second nature, the level of arousal and alertness decreases, but the low margin for error remains the same. Consequently, when something abnormal happens, the reaction time is much greater and in many cases insufficient to recover the situation.

Different phases of flight also create different stress levels, for example, take-offs, approaches and landings create higher stress levels than straight and level flying.

What causes us stress?

In a survey conducted in the mid eighties, pilots rated 7.5 out of 10 in jobs rated for stress. Only police and miners rated higher. The same study also found the following sources created the greatest stress amongst pilots:

- . scheduling and rostering
- . training courses and checks

- . home/work interface
- . insufficient flying
- . responsibility and decision making
- . interpersonal problems
- . fatigue and flying patterns.

Perhaps the most insidious of stresses are the emotional stresses that play a major part in our decision making. Considerable research has been undertaken to find out the effects that

changes in our personal situation have on our physical and mental health and consequent ability to make rational decisions. A study, conducted in the US by Holmes and Rahe of a significant number of military personnel, has produced a numerical total of personal stress factors that provides a predictor for potential breakdown in physical or mental health:

The Holmes-Rahe Scale Life Event

Death of spouse	100
Change in responsibility at work	29
Divorce	73
Son or daughter leaving home	29
Marital separation	65
Trouble with in-Laws	29
Jail term	63
Outstanding personal achievement	28
Death of close family member	63
Partner begins or stops work	26
Personal injury or illness	53
Begin or end school	126
Marriage	50
Change in living conditions	25
Fired at work	47
Revision of personal habits	24
Marital reconciliation	45
Trouble with boss	23
Retirement	45
Change in work hours or conditions	20
Change in health of family member	44
Change in residence	20
Pregnancy	40
Change in schools	20
Sex difficulties	39
Change in recreation	19
Gain a new family member	39
Change in church activities	19
Business readjustment	39
Change in social activities	18
Change in financial state	38
Mortgage or loan less than \$100 000	17
Death of a close friend	37
Change in sleeping habits	16
Change to different line of work	36
Change in eating habits	15
Change in no. arguments with spouse	35
Change in no. family get-togethers	15
Mortgage over \$100 000	31
Holidays	13
Foreclosure on mortgage or loan	30
Christmas	12
Minor violations of the law	11

It is interesting to note that the list covers events of changes that are not just for the worst.

In the Holmes-Rahe test there are no wrong answers, however, in the study of people who scored over 300, 80 per

cent suffered health problems within the next two years. Of those scoring between 150 and 300,50 per cent became ill in the same time frame. If you score between or above these figures, you may need to consider some stress management strategies.

Other stressors for pilots that have induced poor decision making have included the pressures to meet forthcoming personal and passenger commitments. Many flights have ended in tragic circumstances due to "get homeitis" to meet other commitments.

Identifying stresses

Stress can manifest itself in various ways, through our thought and bodily processes, our emotions and our behaviour. Our thought processes can be affected by forgetfulness, loss of concentration and poor decision making while physically, a dry mouth, racing pulse, sweating, shortness of breath, insomnia and nightmares can reflect stress. Emotionally, we may suffer depression, moodiness, anxiety, frustration, guilt and chronic fatigue. Behavioural changes may manifest themselves in work absenteeism, heavy drinking, overeating, restlessness, aggression, drugs and smoking, and erratic behaviour.

Coping with stress

Understanding what causes stress is a major factor in managing it. Mental or cognitive stresses associated with flying can be significantly reduced with practice; those mentally draining activities will become less mental and more perceptual. Basic computer based simulators can assist in honing many flying procedures. Flying practice and a sound knowledge base will improve communication and aircraft manipulative skills to the point no great thought is necessary in applying them. Students of stress suggest there are three main actions that will reduce stress.

These are:

- change our attitude;
- change our fitness level; and
- change our behaviour.

Attitudes

Different people can perceive the same thing in many different ways. Rules and regulations may be seen by some to be superfluous, others will apply them without question or understanding of their intention. Generally, our thoughts and attitudes are the result of our experience, upbringing and peers, however in some instances they can be irrational and destructive. Many of us are cynical of events or rules that affect us and we sometimes exaggerate their consequences.

Personality testing has found that many pilots have some traits peculiar to their profession. High achievement, self-sufficiency, a need for excitement, a reluctance to reveal our true feelings and our inability to handle failure well are examples of the traits found in us. History shows that aviation has produced an unhealthy amount of machoism, invulnerability and a "can-do" attitude. As pilots, we sometimes fall for a state of denial that anything is wrong. We don't like turning back or aborting or cancelling a trip while we still have options, and a strength of will is required to change our attitudes. When we see things in a cynical light, we must try to replace our thoughts with positive notions. Most importantly, we must recognise our own limitations and fly within them.

Fitness

A fit body will generally lead to a fit mind. Regular exercise, adequate rest and relaxation and a proper diet will enhance your mental capacity or make correct decisions. Rather than catch a lift, use the stairs. Buy a dog and go walking or jogging with it on a regular basis. Guilt will often drag you out for a walk with the dog when going by yourself will not provide the motivation.

Behaviour

Changes in our behaviour can significantly reduce our stress levels. Often we tend to bottle up our emotions, adding to our stress levels. It is important that we are able to share our problems with others whether it be in the workplace, at home or socially. Varying our routine can also assist us. "A change is as good as a holiday" has substantial relevance. Holidays were probably introduced into the workplace to relieve stress and provide a regular change to our normal operating environment. Sadly for us, stresses are additive, consequently if there are too many in our lives, we should act to reduce their effect before they affect our health and decision making.

"Amateurs practise until they get it right. Professionals practise until they can't get it wrong."