AVIATION SAFETY BULLETIN

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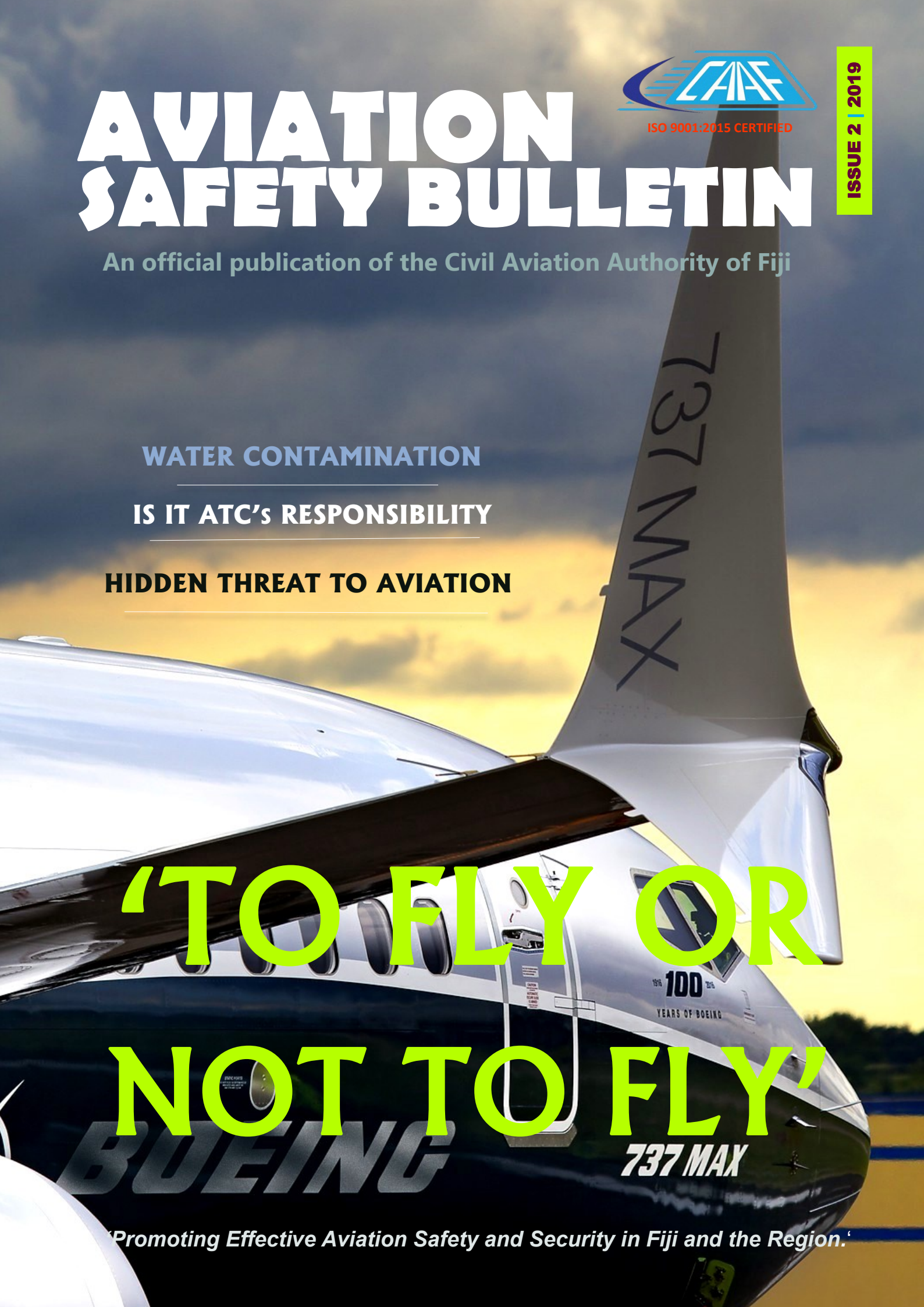
WATER CONTAMINATION

IS IT ATC's RESPONSIBILITY

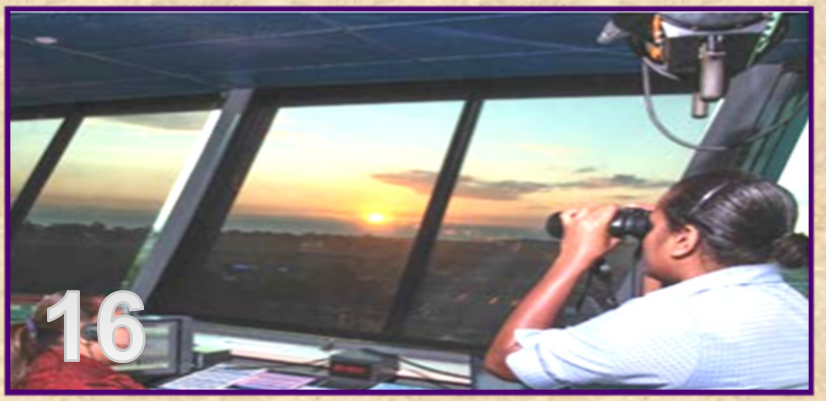
HIDDEN THREAT TO AVIATION



'TO FLY OR NOT TO FLY'

'Promoting Effective Aviation Safety and Security in Fiji and the Region.'

WATER CONTAMINATION



IS IT ATC's RESPONSIBILITY?

HIDDEN THREAT

SAFETY CASE

In this issue...

Cover Photo : Chin H.S, '*How to tell if you are flying on a Boeing 737 Max 8'.*

AVIATION SAFETY BULLETIN

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PUBLICATION CONTENT Unless expressly stated as CAAF policy, the views expressed in *Aviation Safety Bulletin* do not necessarily reflect the policy of the Civil Aviation Authority of Fiji. Articles are intended to stimulate discussion, and nothing in *Aviation Safety Bulletin* is to be taken as overriding any Fiji Civil Aviation Legislation, or any statements issued by the Chief Executive or the Civil Aviation Authority of Fiji.

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From the Acting Chief Executive

Welcome to the second edition of the CAAF Aviation Safety Bulletin (ASB).

We are fast approaching the middle of the year and despite the shorter days and a reduction in temperatures, activities at the CAA are at its peak as Fiji approaches the ICAO Coordinated Validation Mission (ICVM) scheduled to be held from the 22nd August to the 03rd September 2019.

The ICVM in Fiji will focus on Fiji's capability to provide an effective safety oversight system. This will be done via assessment of how Fiji has effectively implemented the requirements of a State Safety Oversight System and the implementation of ICAO's Standards and Recommended Practices (SARPs) as well as review the progress made on the deficiencies identified during the ICAO audit in 2006.

The ICVM 6 member team will be reviewing the 8 Critical Elements pertaining to Legislation, Organisation, Operations, Airworthiness, Aerodromes and Air Navigation Services. Apart from checks that would be conducted in-house, the ICVM team will also be visiting selected industry partners. These industry partners will be advised once dates and times for these visits have been confirmed.

I take this opportunity to thank all who have in their various ways contributed to a safe and thriving aviation industry in Fiji.

Till next time, keep safe.

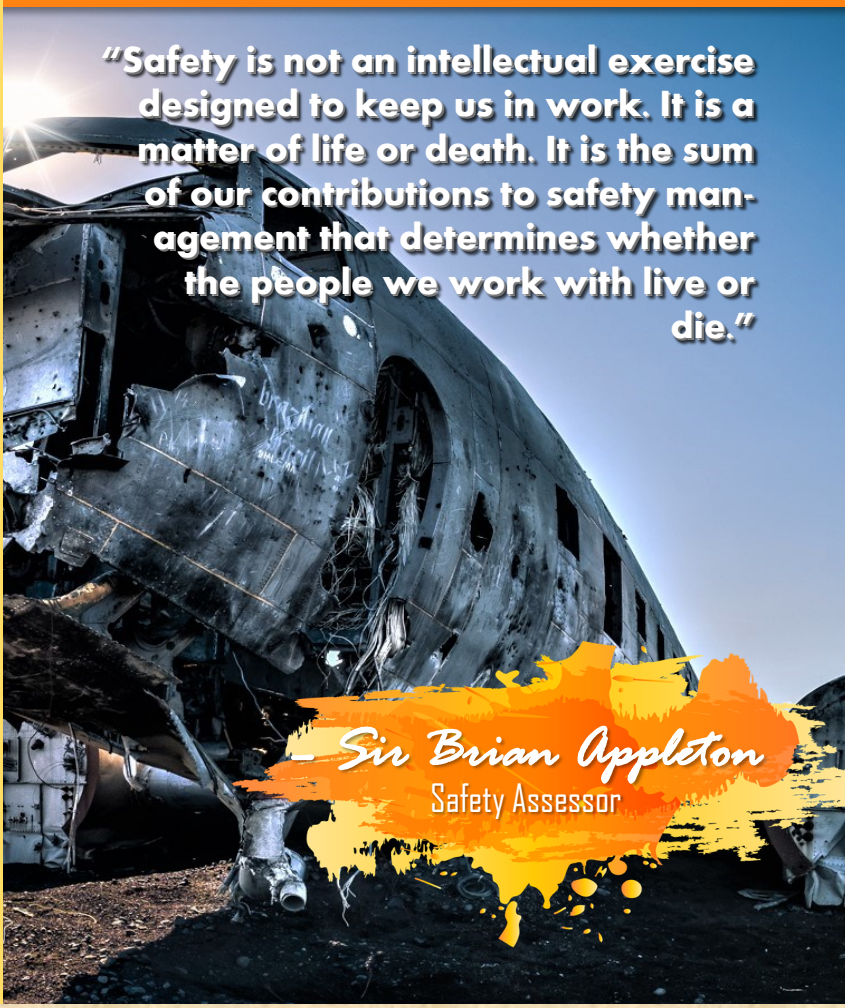
AJAI KUMAR,
ACTING CHIEF EXECUTIVE

Personnel Licensing (PEL) Course 2019

To establish and maintain a Personnel Licensing office, CAAF Inspectorate Staff went through a week long ICAO PEL course …

Story on page 15..

SAFETY FIRST!



Aircraft Fuel System: Water Contamination of Fuel Tank System

Introduction

Nadi Airport, as with all the domestic airports in Fiji, is located in close proximity to the coastline and with this comes exposure to air which has a high salt content as does the sea water. This salt content can be very corrosive to domestic aircraft and one method used by domestic Operators to keep the corrosion at bay is to wash their aircraft at the completion of the day's flying.

While this method maybe cost effective it also has its risks concerning the safe operation of aircraft and the key risk is that water, during the washing process, may enter the fuel tank(s) through a loose fitting fuel tank cap or through the fuel tank venting system and contaminate the tanks. The end result of this occurring is a possible engine failure.

In the interests of safety the Authority has enclosed a very informative article which highlights the risks of washing aircraft and which domestic Operators may find useful.

This Special Airworthiness Information Bulletin (SAIB) is to inform pilots, owners, operators, and maintenance and service personnel of general aviation aircraft of the hazards associated with water contamination of fuel tank systems. The fuel tank system consists of all tanks, components, lines, fittings, etc., from the fuel tank to the engine.

Background

Water may enter the fuel tank system via any penetration in the wing fuel tank and from moisture condensation inside the tank. Water in the fuel may come out of solution, settle and make its way to a drain location in the form of a blob, pea, or BB-shaped translucent mass found at the bottom of the sampler cup. Water suspended in the fuel may lead to a cloudy or hazy appearance in the sampler cup. Water may have dissolved in the fuel, but the conditions have not yet occurred to cause the water to come out of solution and perhaps adhere to the dry tank upper surface or walls (similar to condensation). Understanding this, all pilots, owners, operators, maintenance, and service personnel should assume some water exists in the fuel tank system on the airplane.

Recommendations

We recommend you do the following:

1. Become familiar with all drain locations on a specific model of airplane. From model to model in a series of airplanes, the number, type, and location of drains may not be the same. ***There is no single point of drainage that can be used to check for all fuel system contaminants simultaneously***. Take the time to properly check all drain locations, before each flight.

2. With the airplane in the normal ground attitude and starting at the highest drain location, check all drain locations for contaminants before every flight, whether or not refueling has occurred. Have fuel sample disposal provisions and proper lighting at your disposal to properly check for fuel tank system contamination.
   - Drain at least one cup of fuel (using a clear sampler cup) from each drain location.
   - Drain the fuel strainer as required to completely flush its contents in each of the fuel selector positions.
   - Check for water, clarity, cloudiness, haze, proper fuel type/grade (i.e.; 100LL is light blue in tint, jet fuel is clear or yellowish), odor, or other contaminants.
   - Allow time between fueling and draining. It takes time for any contaminates to settle to sump area prior to draining tanks.

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- If any contamination is detected in the fuel tank system, thoroughly drain all drain locations again.
- If contamination is observed, take further samples until the fuel appears clear, and gently rock the airplane in both the roll and pitch axis to move any additional contaminants to the drain points.
- Take repeated samples from all drain locations until all contamination has been removed.
- If contaminants are still present, do not fly the airplane. Have qualified maintenance personnel drain and purge the fuel tank system. Remove all evidence of contamination prior to further flight.

3. Take proper precautions to preclude water from entering into your fuel tank system from an external source (**washing**, rain, snow, sleet, etc.). Regularly check all external entry sites (caps, access panels, etc.) for evidence of water ingress into the fuel tank system. When possible store the airplane indoors. If stored outdoors or exposed to wet conditions (**washing**, rain, snow, sleet, etc.), examine the fuel tank system drains for contamination more frequently.

- Pay particular attention to airplanes that have been externally cleaned and/or refinished.
- Avoid using pressure washers near fuel system caps/filler areas, when washing the aircraft.
- It is a good idea to remove accumulated snow/ice from the fuel tank entry sites to prevent ingress of water during melting.

4. During annual or 100-hour inspections do the following:
   - Check fuel caps, cap gaskets, cap adaptors, cap adaptor gaskets, fuel filler neck to adaptor sealer, fuel gage transmitter gaskets, gage transmitter access covers, and upper surface inspection covers for condition, proper sealing, security, alignment, etc. Ensure to service and clean these areas, replacing parts as necessary.
   - Drain and flush the fuel strainer and carburetor bowl completely.
   - Inspect the interior of metal fuel tanks for signs of corrosion, which may indicate water contamination.
   - Inspect the interior of bladder tanks for wrinkles, broken or missing hangers, etc.
   - If signs of contamination are found, alert the owner and fuel supplier of your findings for corrective action.

5. If aircraft has a fuel drain valve replaced with a cap or plug, you should suspect water contamination in the respective tank. Strongly consider having a qualified maintenance technician install the proper drain valve prior to flight

6. Take precautions to preclude water migration in the fuel tank system from an internal source (free water coming out of solution). Keep fuel tanks full when the airplane will not be operated regularly to minimize moisture condensation within the tanks. Keep fuel tanks full between flights, provided weight and balance limitations permit. Limit the fuel tanks exposure to large temperature fluctuations as much as possible. If the airplane has been exposed to sustained wing low or unusual attitudes or a fuel tank has been run dry, sump contaminants may have migrated throughout the fuel tank system.

7. Know your fuel supplier. Regularly check and verify quality controls are in place to ensure you receive only dry, uncontaminated fuel from a supplier. Have on-field checks and verify to ensure continued supply of dry uncontaminated fuel to an operator. Gain assurance that the fuel supply has been checked for contamination and is properly filtered before allowing the airplane to be serviced. When ordering fuel, specifically state the exact fuel grade and quantity needed. Be present at each and every refueling and observe the fueling process.

8. Collect all sampled fuel in a safe container and dispose of properly.

9. Replace all safety items removed during contamination checks. Correct all unsatisfactory conditions found during or any examination prior to further flight.■

(Source: NZCAA & FAA)

Picture: Turtle Air

The Hidden Threat To Aviation

The unpredictability of an individual becoming an insider threat is unsettling. Since 9/11, most travelers have got used to the sight of fortified airports around the world. Few people these days are surprised to see barriers and other physical protection measures around them, as well as the presence of armed police patrols.

An airport is an enormous, complex operation. On appearance it is physically secure and reassuring for travelers. It acts as a barricade against a possible terror attack. However, there is also a hidden threat from inside the Aviation Environment. This threat has no boundaries and exists across the globe. The "insider" has the ability to overcome many of these overt security measures if s/he wants to target and threaten passengers or the wider population.

To define the term insider threat more clearly, we need to understand what creates an insider. Essentially in Aviation Environment, an insider threat is a malicious threat to an organization that comes from people within the organization, such as employees, former employees, contractors or business associates who have access to restricted areas and sensitive information that ordinary civilians do not have access. Stating this it can be noted that an insider could be nearly anyone, including an employee, contractor, consultant or anyone else who has legitimate access to the critical information or assets.

Since an insider already understands the external security of the organization's operation s/he will be able to exploit these security measures very easily. Many insiders are already in a position of trust and might hold an access badge or security clearance level. Given this enhanced level of access, they are more likely to be able to identify vulnerabilities and target the weakest areas of the organization.

What motivates an insider?

Different factors can make an employee become an insider. Some factors are:

- Gaining of financial advantage
- Terrorism focused,
- Revenge, or
- Simply because they are disgruntled or unhappy with the way they have been treated by their organization.

However a combination of the factors mentioned above could also be a motivation for an employee to become an insider.

Malicious or unintentional insider?

While the common understanding of what constitutes an insider focuses on the 'malicious insider' who knowingly undertakes their action, an equal danger exists through the actions of the 'unintentional insider'.

Insider threat can be categorized as:

1. Malicious insiders, which are people who take advantage of their access to inflict harm on an organization;
2. Negligent insiders, which are people who make errors and disregard policies, which place their organizations at risk; and
3. Infiltrators, who are external actors that obtain legitimate access credentials without authorization.

While the unintentional insider is not aiming to harm their organization, the impact of their omission or failure to comply with procedures could be equally as devastating as the impact from a malicious insider attack.

Methods of attack

An insider can attack its organization in several ways. Spying, unauthorized and damaging releases of information, sabotage, corruption, theft, smuggling, impersonation, terrorist attacks are only a few things insider threats are capable of doing.

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In aviation security context insiders who tend to have criminal and/or financial motivation could smuggle weapons or explosives to, or from, their country through aircraft or cargo.

The consequences of a terrorist insider can be even more catastrophic. The recent example of successful terrorist attacks involving insider threats in the aviation system was on February 2, 2016 in Mogadishu, Somalia where insiders working as airport security employees coordinated the passage of an explosive filled laptop through a security checkpoint x-ray machine (it is believed the airport workers were associated with terrorist group Al-Shabaab).

And in 2015 Germanwings Flight 9525 had a fatal crash. The investigation determined that the crash was caused deliberately by the co-pilot after locking the aircraft pilot outside the cockpit door and initiating a controlled descent that continued until the aircraft impacted a mountainside.

Identifying the Insider Threat

Much attention has been given to behavioral indicators of potential insider threat actors. However, everyone has life experiences where their behavior could potentially change from time to time. While obvious lifestyle and behavioral indicators such as an employee becoming rich for no apparent reason; someone becoming more reclusive and disengaged from colleagues; an employee carrying out unauthorized or suspicious activity; through to an employee expressing strong and hostile views against their organization, may be seen as insider threat indicators, they may also be due to some other issue such as workplace bullying, bereavement, lifestyle stressors or the triggering of psychological vulnerabilities.

However, indicators can be important where they are repeated and there is an unaccounted change to usual behavior. The key factor is that someone needs to take responsibility to act appropriately when these indicators are present.

What makes this complex is that there is no standard profile of an insider. However, certain traits have been found to be present in some insiders. These include excessive feelings of self-importance, arrogance in their dealings with colleagues, a manipulative nature, displaying a superficial persona with colleagues, and impulsiveness in their decision-making. Nonetheless, as well as some insiders possessing high self-esteem, others have been found to suffer from low self-esteem. If you look at your work environment, I am sure many of the above traits can be found, however, possession of these traits does not necessarily mean they represent an insider threat!

Combating insider threat?

Insiders do not pop up overnight. An employee could be facing several hardships in his/her daily life which can cause these employees to work against the interest of the organization. However as highlighted earlier a combination of different factors along with financial motivation can also be a significant player, such as disgruntlement due to ill-treatment by his/her organization or their colleagues, under payment and not being recognized.

Due to all these reasons it is necessary to adopt a holistic and integrated approach to organizational security. Mitigation measures that should be considered include:

- Identifying key infrastructure and assessing potential vulnerabilities which could be exploited by an insider
- Creating robust pre-employment screening and recruitment processes to prevent insider infiltration
- Random unpredictable background check.
- Identifying and developing on-going security measures to address the issue of insiders already within your organization
- Last minute change of allocated location of duties.
- Pairing up staff of two different personalities who usually don't get on well together.
- Creating an effective reporting culture to mitigate the opportunities for insider attack, with a permanent support structure and engagement by senior management
- Implementing staff education/training, and developing key processes, to reflect insider threat concerns.■

(Source : International Airport Review)

CONSTRUCTING A SAFETY CASE

Why A Safety Case?

There has been considerable publicity given to CAAF's efforts to build a more mature two-way relationship with industry and move from prescriptive to outcome based regulations. As a consequence, operators will decide how best to meet safety goals and will need to show that their operations are acceptably safe. One way to do this is to 'make a Safety Case' or demonstrate to the regulator that safety is being effectively managed.

Safety Cases are not new. They have been used in hazardous industries since the 1970s, but they are now gathering international momentum in aviation.

Beyond SMS

It is reasonable to wonder why CAAF would advocate a new approach much later after publishing guidance material on Safety Management Systems (SMS).

SMS was certainly a step forward from previous management approaches, but it does have some limitations. For example there is no self-contained body of evidence from which an operator can demonstrate that its operations are acceptably safe, no argument to make sense of what evidence there is, and no formal provision for updating this body of evidence when operations or equipment change. Additionally, smaller operators found it difficult to scale the sort of SMS described, to fit their operations.

In effect, a Safety Case builds on the existing SMS approach, and overcomes its perceived limitations.

A Safety Case is in two parts:

1. A Safety Report: the documented evidence that the operation will be safe, together with a supporting argument to make sense of the evidence.
2. A Safety Management System, to make sure that things in the Safety Report get done.

The Safety Report says *what* you will do in order to operate safely; the SMS is about *how* you do it.

What It Looks Like

The structure of a Safety Case is shown in Figure 1. This template may look formidable, but broken down into its separate parts, none of it is very difficult. The components of the Safety Report are shown in blue, while the components of the Safety Management System are shown in yellow.

Setting Up the Safety Management System

The first thing to do is to provide the SMS resources (shown in yellow) since they will construct the Safety Case. Form a Safety Committee, and nominate a Safety Manager who, under Regulation 119, will be an 'approved person'.

The Safety Committee should have representatives from each of the line operations, so if you have a fleet of aircraft and a maintenance department, you'd want representatives from each. In a small operation you'd probably have the Chief Pilot and Chief Engineer, but in a larger organisation you might be better off with separate representatives, who can give more of their time to the safety function.

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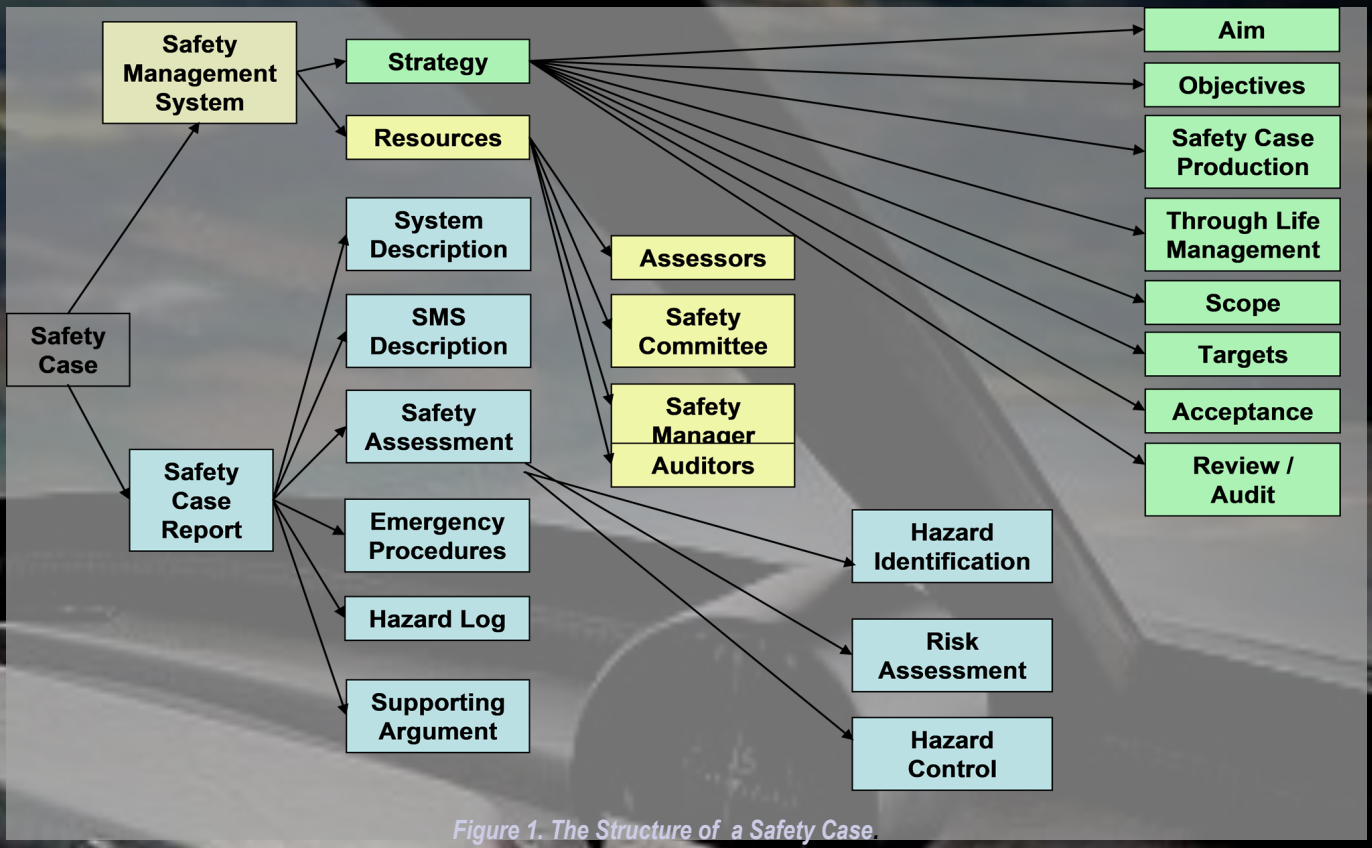

Figure 1. The Structure of a Safety Case.

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The Safety Committee should have representatives from each of the line operations, so if you have a fleet of aircraft and a maintenance department, you'd want representatives from each. In a small operation you'd probably have the Chief Pilot and Chief Engineer, but in a larger organisation you might be better off with separate representatives, who can give more of their time to the safety function.

The Safety Case Report: System Description

The system description will include a company tree showing reporting lines, and the nominated persons occupying the various positions. The Safety Manager position customarily reports directly to the Chief Executive, and needs to be on a par with the Chief Pilot and Chief Engineer, so that he does not feel it necessary to defer to them on safety matters.

The description should also record why things are done the way they are, otherwise systems may be kept in place when the rationale for them has gone. This is particularly the case where there are outstations, or more elaborate communication systems.

In this section you need to describe such things as the communication system, the safety management system itself, the safety assessment system and safety reporting system. The SMS description should include all the items shown on the right in Figure 1 (green) as well as its composition.

Finally, manuals of procedures (such as the Maintenance Manuals) form part of the system description.

Safety Assessment

Hazard Identification

Safety assessment starts with a hazard identification exercise. It will be necessary to go right through the whole operation, looking for anything that could present a hazard – anything that could start something which is unsafe. Ideally the assessment team should include someone from outside the organisation, but who is familiar with your type of operation. This is because it is very easy to overlook something which is familiar: it just doesn't seem to present a hazard.

An example of such a hazard occurred in a nuclear power plant: a cleaner caught his shirt on a switch which protruded about 75mm from a wall. When he pulled his shirt free, he inadvertently operated the switch. This de-powered the controlling rods in the reactor pile, so the plant went into emergency shut-down, and took four days to reactivate. You can bet that that switch now has a guard!

At this stage it is important to note everything that could be a hazard, even if it seems like normal operation. Every hazard identified should be entered on a Hazard Log.

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Picture: Clarfeld

Continued from page 9..

Risk Assessment

There are some very elaborate schemes for assessing risk, which is considered to be some combination of the consequences which may ensue from a hazard, and the probability of those consequences coming about. The aim is to decide which hazards are important and so must be addressed right away, and which can be deferred. This approach may work for some industries, but in aviation operations there are a number of difficulties:

1. For something with unacceptable consequences, such as an aircraft accident, the appropriate definition of risk is 'the probability that this consequence will be incurred'. The UK CAA sets an 'acceptable probability' at the same level as that for structural failure, 1 in 10^9 hours of operation. The reality is that there are no varying levels of consequence: an accident is an accident. This is because of the nature of an aircraft. It has high energy, usually a lot of inflammable fuel, and a relatively fragile structure. Even something as apparently minor as a fractured tank access plate can end in disaster. With no varying levels of consequence, there is no rational basis for prioritising hazards.

2. Apparently insignificant hazards can combine in unexpected ways, to produce a potentially dangerous condition. You can try 'what if' exercises with combinations of conditions, but the only really effective solution is to drive down all hazards as soon as you can.

3. People are not good at judging the probability of apparently remote events, such as a hull-loss accident. 'Once in 30 years' will not be considered remote, when the 30th year comes around.

4. You have a legal duty to drive down all hazards until they are 'As Low As Reasonably Practicable' (ALARP) – see Figure 2. For a small organisation, the boundaries can be set pragmatically – you set out your arguments as to why the steps you have taken have reduced that hazard until it is as low as reasonably practicable. For a larger organisation, however, a quantitative approach is needed, and the bounds set by Eurocontrol (upper bound at 2 x Target Level of Safety, lower bound at 0.02 x TLS) may provide a guide.

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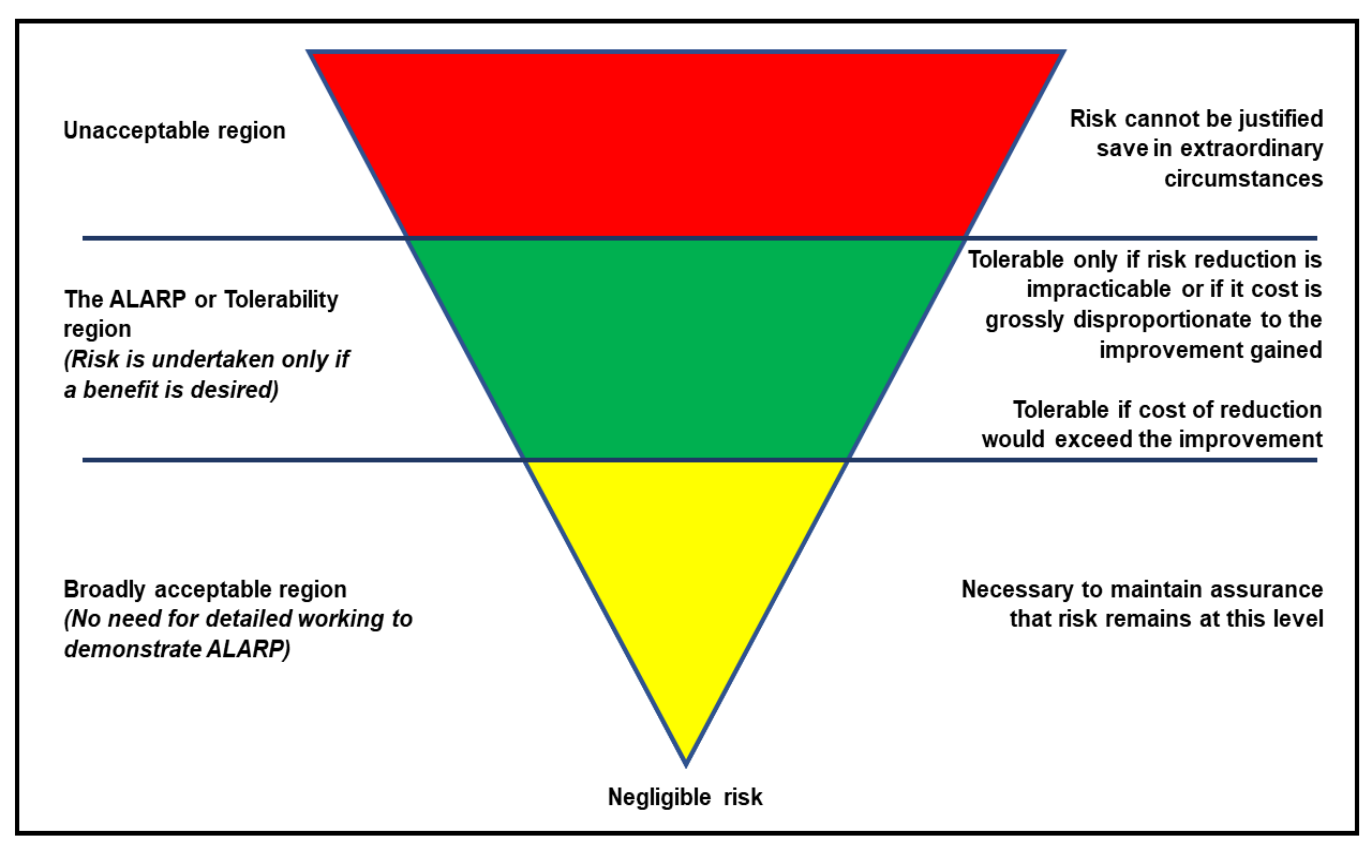

Figure 2. 'As Low as Reasonably Practicable'.

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Hazard Control

Hazard control means reducing or eliminating known hazards. No operation can be perfectly safe, but you must drive down the hazards until the cost of further reduction is entirely disproportionate to any benefit gained. Constructing a Safety Case can provide you with evidence that you have reached ALARP, and so provide you with a valuable legal defence, if you have an accident.

Naturally, if you can get rid of some hazard altogether, then that is the best solution. Other solutions include (in order of reducing effectiveness):

- Physical barriers;
- Procedures;
- Training;
- Warning notices.

Hazard Log

If your operation has several departments, each may have its own hazard log for staff to record hazards that they see during operations, but these logs should be regularly consolidated, so that you have one central hazard log in the Safety Department. If you are using computer spreadsheets for the hazard logs, consolidation is easy.

Reporting Systems

It is important to know what is going on in your operation, and in your environment. You need regular reports on things which may impact on safety: recurring defects, pilot reports of unusual incidents, and so on. However, people are sometimes reluctant to report through 'usual channels,' and you need an anonymous reporting system as well. For this to work, you have to demonstrate that it truly is anonymous: have a demonstrable way of de-identifying reports, and make sure that they are locked away until this has been done.

Emergency Procedures

This doesn't mean the procedures in the aircrew checklists. In the event of an accident, it is difficult to think clearly, and you should think through and document all the actions you will need to take, both in the immediate response to the accident, and the recovery procedures which will return your company to normal operation.

Supporting Argument

It is not much help having a thick book of evidence, without some way of making sense of it all. The supporting argument shows how the evidence proves, both to you and to CAAF, that the operation is safe. Broadly, it will argue (referring to the appropriate items of evidence) that the operation is acceptably safe because you have identified all the hazards, and reduced them as far as you can, and have ways to keep yourself informed about possible new threats. You will be conducting regular audits to make sure that your operations are within the Safety Case, that is to say, within the boundaries that you have proved to be safe.

For a larger organisation, there are formal logical methods such as Goal Structured Notation, which will help you to assemble you Safety Argument, and ensure that no important matters have been overlooked.

Monitoring and Review

Nothing stays the same for long. Operations may change, and new threats may emerge. One of the SMS functions is therefore a regular review, to ensure that the Safety Case is still valid, and that operations are within the boundaries that it has defined.

Summary

The Safety Case for your organisation demonstrates, both to you and to CAAF, that your operation is acceptably safe. It consists of the Safety Report, showing what you are going to do to ensure that it is safe, and the SMS which implements the Safety Report. It provides a structure for your SMS to operate, and also to audit effectively. It need be no more complex than your operation needs, and is automatically scaled to the size and complexity of your operation. ■

(Author : Prof Dimitri Zotov)

TO FLY OR NOT TO FLY

"...there is no pre-determined date to unground of the aircraft."

On the 22nd - 23rd May 19, the Federal Aviation Administration (FAA) conducted a Boeing 737 MAX Safety Summit in Dallas, USA. The meeting comprised of some thirty-three countries with sixty-two delegates participating in the two-day conference. CAAF was also represented at this summit.

The summit provided a visual overview of the FAA activities related to the B737 MAX's response to orient attendees to the more technically–focussed elements. This highlighted the FAA accident investigation support to Indonesia and Ethiopia; changes to the FAA certification process and MCAS software, and planned procedural and training changes. A review was also carried out of the FAA engagement efforts to share with National Aviation Authorities (NAA) about the software update and associated training, including a thorough bilateral cooperation with Transport Canada, EASA, ANAC (Brazil) and CAAC (China).

The outcome of the meeting emphasized that all NAAs will work with the FAA to unground the B737 MAX aircraft. The major NAAs, EASA, Transport Canada, Brazil, CAAS (Singapore) and CAAC have agreed to work in partnership, share information with a central focus on safety and collectively allow the 737 Max back into the air.

The FAA has highlighted their road map to collaborate with the NAAs and unground the B737 MAX which are as follows:

Partnership in Safety

- Global aviation safety is a shared goal.
- Aviation Safety works best when countries work together.
- Key elements: Collaboration, Transparency, Safety information sharing.
- Society's demand for safety is higher than ever before – safety is a way of living.

Where Are We Today?

Design Changes

- Changes have been made through software upgrade to the Flight Control Computer.
- Limits MCAS command to a maximum of one input for a single high Angle Of Attack event.
- Limits MCAS maximum command to ensure sufficient handling capability using elevator alone.
- Changes to the Primary Flight Display System.
- Implementation of the AOA Disagree Message on the Primary Display Panel.

Dan Elwell, A/FAA Administrator, Statements made below at the opening and closing sessions :

- "FAA as the state of design will work closely with other world NAAs to return the B737 MAX to service"
- "FAA will only return 737 MAX to flight if it is airworthy and safe to do so"
- "All National Aviation Authorities s to Unground the 737 MAX at the same time"
- "No safety to a date, let process decide the date – data and technical information will determine"
- "Public confidence – show world we are not fractional Regulators – we are united".

FAA PLANS TO UNGROUND THE B737 MAX THROUGH AN AIRWORTHINESS DIRECTIVE [AD] AS FOLLOWS:

Design Change Approval and FAA-planned AD Actions:

- FAA has been directly involved in all areas of MCAS design change and approval;
- Certification Plan;
- Flight Control System Safety Analysis and Assessment;
- MCAS Software Design Assurance [Speed Trim System – FCC];
- Flight Deck Integration;
- Flight Testing;
- Flight Crew Training Plan;
- Disposition/Recommendation from the Technical Advisory Board;
- Simulator activity, training requirements and procedures – simulator checklist will be scrutinised carefully;
- Lift the Presidential Executive order;
- FAA certification approval will be provided once above items are satisfactorily completed.

Based on the above FAA plans, there is no pre-determined date to unground of the aircraft. Very likely between August to December 2019 at the earliest. ■

Photo from Boeing

Aeronautical Station Operator's License

Picture: AOPA

Who does this information apply to?

- Personnel requiring access to the aerodrome maneuvering area.

What training is required to be completed for the issue of an Aeronautical Station Operator's License?

- Initial ASOL course from an approved training organization (Fiji Airports– Aviation Academy)
- For more info contact <JocelynH@fijiairports.com.fj>.

How do I get an ELP assessment conducted?

ELP examination is conducted by Fiji Airports- Aviation Academy during the initial ASOL Course.

What is the validity of the Aeronautical Station Operators License?

One year.

Am I required to hold an Aviation English Language Proficiency (ELP) to be eligible for the grant of an ASOL?

Yes, Minimum ELP – Level 4 for a grant of ASOL.

How do I renew my Aeronautical Station Operators License?

- Renewal is conducted every year.
- Aeronautical Information Circular (AIC) 13/18 contains information on the renewals schedules and its requirements.

For more information on the Aeronautical Station Operators License contact www.caaf.org.fj ■

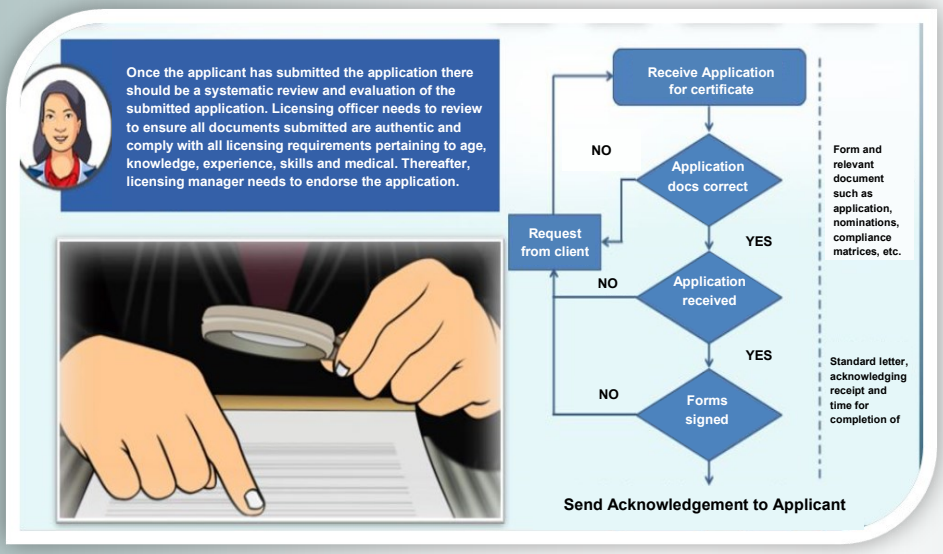
Personnel Licensing

The Republic of Fiji, as a member of the International Civil Aviation Organisation (ICAO) and signatory to the Chicago Convention complies with the standards published in the Annexes to the Convention on International Civil Aviation. The Civil Aviation Act empowers the Civil Aviation Authority of Fiji to implement the Chicago Convention and this document is the Authority's implementation of those parts of Annex 1, Licensing of Personnel.

PERSONNEL LICENSING is a critical area to the safety of aviation and provides evidence of competency that is the result of training, and Personnel Licensing Office must ensure effective implementation of the Standards And Recommended Practices (SARPs).

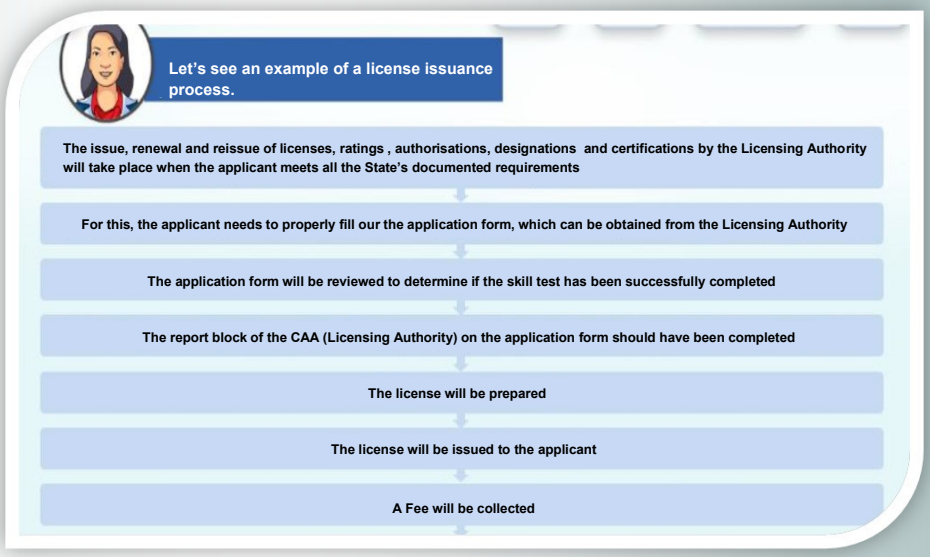
LICENSING is the act of authorizing defined activities which should otherwise be prohibited due to the potentially serious results of such activities being performed improperly.

Personnel Licensing (PEL) is a department within the Civil Aviation Authority of Fiji (CAAF). The Senior Personnel Licensing Inspector (SPELI) reports to the Chief Executive Officer of the Civil Aviation Authority of Fiji and is responsible for the oversight of ICAO Annex 1 requirements. To discharge its responsibilities, the PEL Department has to carry out many functions/ tasks which are normally organised around five major functional areas: examinations (flight crew, aircraft maintenance personnel, air traffic controller, etc.), licensing, training, regulatory and administration. ■



Application Process

License Issuance Process



PEL Training for Inspectorate Staff

The Personnel Licensing (PEL) System Course was conducted by ICAO on the 18th to the 22nd March 2019. The one week duration course provides the inspectorate with the knowledge to establish and maintain a personnel licensing (PEL) office in a regulatory authority.

The first part (Part one) of the course is passing a mastery test at the end of the online e-learning course with the minimum score of 80%. A certificate is awarded after successful completion. Part Two of the course is classroom based which was conducted by ICAO in CAAF Training Room, Nadi.

The course has targeted the CAA Inspectorate and cover areas on:

- ICAO Licensing Obligations
- Establishing and Maintaining a PEL system
- Medical Certification Process
- Determining Which Licensing Functions to Obtain by External Service Providers
- Managing a Knowledge Testing System
- Conducting the Five Phases of the Licensing Process:
    - Pre-application phase
    - Formal application phase
    - Evaluation phase
    - Demonstration phase
    - Issuance phase
- Issuing a Validated or Converted Foreign License
- Surveillance of Licensed Aviation Personnel
- Compliance and Enforcement Action

The course defines to the inspectorate on how to:

- Establish and maintain a PEL system.
- Evaluate a license application for completeness and accuracy .
- Determine if an applicant is eligible for the license sought.
- Conduct flight crew license and aviation maintenance technician skill tests.
- Administer, grade and document the results of knowledge tests.
- Validate and convert foreign licenses.
- Determine the appropriate document to be issued based on the skill test results.
- Obtain knowledge in testing services from an external service provider.

The course has provided the CAA Fiji Inspectorate staff to acquire knowledge on the Personnel Licensing Process and its system and has provided better understanding on the state obligation to those parts of ANNEX 1.■

Is It ATC's Responsibility To Ensure Read backs are Correct?

YES *a controller absolutely must listen to read-backs and ensure they are correct. This is commonly referred to as hear-backs.*

Consider the following excerpt from ICAO Annex 11, Air Traffic Services

> 3.7.3 Read-back of clearances and safety-related information
>
> 3.7.3.1 The flight crew shall read back to the air traffic controller safety-related parts of ATC clearances and instructions which are transmitted by voice. The following items shall always be read back:
>
> a) ATC route clearances;
>
> b) clearances and instructions to enter, land on, take off from, hold short of, cross and backtrack on any runway; and
>
> c) runway-in-use, altimeter settings, SSR codes, level instructions, heading and speed instructions and, whether issued by the controller or contained in ATIS broadcasts, transition levels.
>
> 3.7.3.1.1 Other clearances or instructions, including conditional clearances, shall be read back or acknowledged in a manner to clearly indicate that they have been understood and will be complied with.
>
> 3.7.3.1.2 T he controller shall listen to the read-back to ascertain that the clearance or instruction has been correctly acknowledged by the flight crew and shall take immediate action to correct any discrepancies revealed by the read-back.

If, after a read-back by a flight crew, the controller neither acknowledges nor corrects the read-back, most flight crews will perceive this as an implicit confirmation of the read-back. This makes hear-back errors very dangerous, and is the reason why the pilot-controller communication loop has, not two, but three steps, the third step being the hear back:

> A controller, should be on the lookout for all incorrect read backs. But controllers are human, and can easily miss them, or say things in correctly. Incorrect read backs /hear backs are often more of an annoyance versus an actual separation issue.
>
> The controller must listen to the read-back and to ascertain that the clearance or instruction has been correctly acknowledged by the flight crew and shall take immediate action to correct any discrepancies revealed by the read-back. (ICAO Annex 11 Chapter 3 Para 3.7.3).

Flight Crew

The flight crew must read back to the air traffic controller safety-related parts of ATC clearances and instructions which are transmitted by voice. The following items must always be read back:

a) ATC route clearances;

b) Clearances and instructions to enter, land on, take off from, and hold short of, cross or back track on any runway; and

c) runway-in-use, altimeter settings, level instructions, heading and Speed instructions and, whether issued by the controller or contained in Automatic Terminal Information Service (ATIS) broadcasts, transition levels.

Other clearances or instructions, including conditional clearances, must be read back or acknowledged in a manner to clearly indicate that they have been understood and will be complied with.

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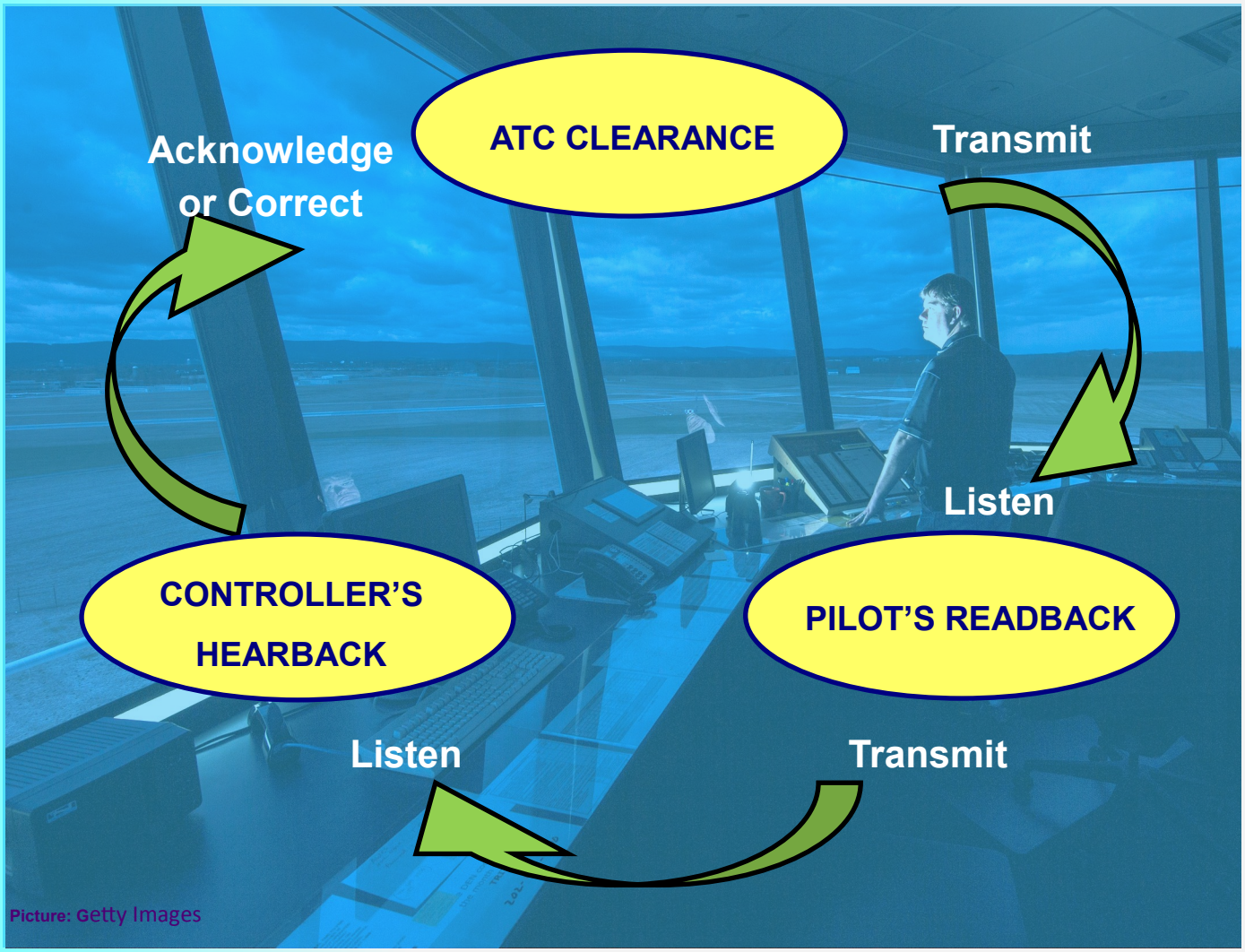

Incorrect read-backs can be extremely dangerous. For instance, they could result in a level bust, mid-air collision or runway incursion.

Therefore, performing appropriate hear-backs is an essential part of ATC training, and is taught to ATC trainees from day one. The importance of active listening is demonstrated in a simulator environment, where simulator pilots will occasionally - either intentionally or by mistake - make incorrect read backs, the result of which will be a dangerous situation, if not corrected promptly. ■

[Source: Skybrary and Aviation Herald]

CAA Fiji is keen to hear from you regarding our levels of service. If you believe you have constructive ideas on how we can improve our services, or would like to report instances where we have failed to meet your expectations, please send your feedback to CAAF, preferably using the QA 108 form that can be accessed from our website. This can be sent to CAAF by faxing it to the Executive Office on 672 1500, or dropping it in the feedback box in the foyer of CAAF HQ, or emailing to : ***info@caaf.org.fj.***

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HYPERTENSION

HIGH BLOOD PRESSURE

High blood pressure is a common condition in which the long-term force of the blood against artery walls is high enough that it may cause health problems, such as heart failure.

Blood pressure is determined by the amount of blood the heart pumps and the amount of resistance to blood flow in the arteries. High blood pressure is due to more the heart pumps and the narrower the arteries.

One can have high blood pressure for years without one knowing. It is important to get yourself checked by your doctor for high blood pressure as it increases the risk of serious problems, including heart attacks and stroke.

Symptoms

A few people may present with following symptoms:

- Headache
- Shortness of breath
- Nose bleeds

The above signs are not specific, and these may occur when blood pressure is very high. Sometime no signs and symptoms would be present, even though one may have very high blood pressure.

Causes

There are two types of high blood pressures:

1. Primary (essential) hypertension
2. Secondary hypertension

Primary – for most adults, there is no identifiable cause of high blood pressure. This is called primary or essential hypertension.

Secondary hypertension is due to underlying conditions, and some of them are:

- Kidney diseases
- Adrenal gland tumours
- Thyroid problems
- Certain defects that one is born with (congenital) in blood vessels
- Obstructive sleep apnoea
- Some drugs:
  - cold remedies
  - pain relievers
  - some prescription drugs
  - illegal drugs – cocaine and amphetamines
  - birth control pills.

Risk Factors

Age – blood pressure increases with age. More likely to develop after age 65.

Family history – tends to run in families.

Overweight or obese – more oxygen and nutrients are required to your tissues. More blood circulates through blood vessels, more pressure on your artery walls and more work for the heart.

Using tobacco – smoking and chewing tobacco – immediate rise of blood pressure temporarily. Chemicals in tobacco damage the arterial walls. Passive smoking can also increase heart disease risk.

Too much salt in the diet – increases retention of fluid in the body which increases blood pressure.

Stress – high level of stress increases blood pressure temporarily. One may try to relax by eating more, using tobacco or drinking alcohol.

Certain chronic conditions – kidney diseases;

Diabetes;

sleep apnoea.

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Picture: Lifealth

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Sometime pregnancy may contribute to high blood pressure.

But for growing kids risk factors such as poor lifestyle, unhealthy diet, obesity, lack of exercise contributes to high blood pressure.

Complications

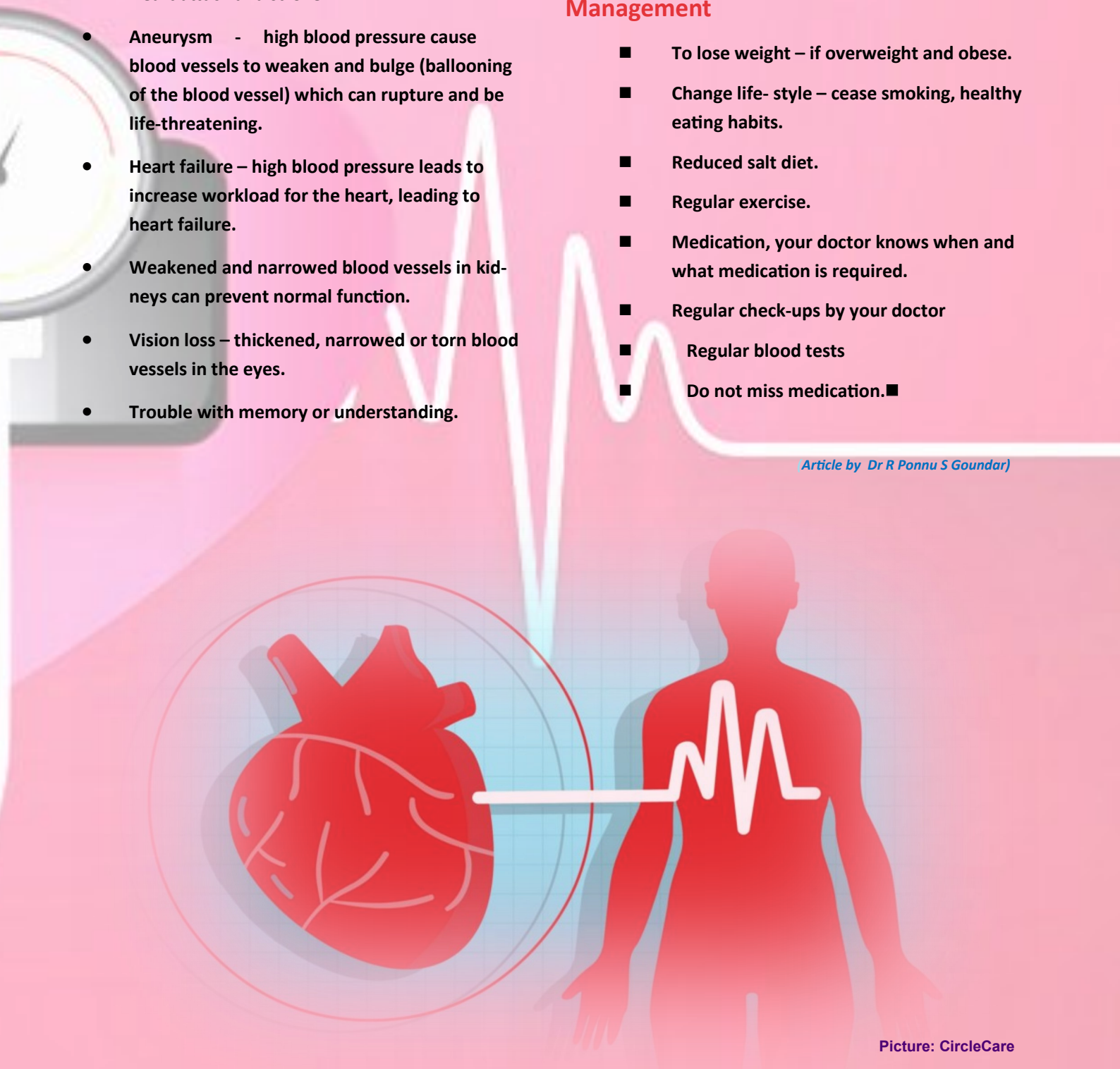
Uncontrolled high blood pressure can lead to:

- **Heart attack and stroke.**
- **Aneurysm - high blood pressure cause blood vessels to weaken and bulge (ballooning of the blood vessel) which can rupture and be life-threatening.**
- **Heart failure – high blood pressure leads to increase workload for the heart, leading to heart failure.**
- **Weakened and narrowed blood vessels in kidneys can prevent normal function.**
- **Vision loss – thickened, narrowed or torn blood vessels in the eyes.**
- **Trouble with memory or understanding.**
- **Dementia.**
- **Metabolic syndrome**
  - **leading to increased waist circumference.**
  - **high triglycerides (bad cholesterol).**
  - **low high- density lipoprotein (HDL) cholesterol (good cholesterol).**
  - **High insulin levels, likely to develop diabetes, heart failure and stroke.**

Management

- **To lose weight – if overweight and obese.**
- **Change life- style – cease smoking, healthy eating habits.**
- **Reduced salt diet.**
- **Regular exercise.**
- **Medication, your doctor knows when and what medication is required.**
- **Regular check-ups by your doctor**
- **Regular blood tests**
- **Do not miss medication.■**

Article by Dr R Ponnu S Goundar)



Picture: CircleCare


Make flying Safe!
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