

Health Promotion in Aviation



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Topics covered

- What do we mean by 'health promotion' in aviation?
- Why are we discussing this?
- What is the role of the AME in health promotion?
- How can aircrew examinations contribute to health promotion in aircrew / ATCOs?
- Signposting – where can the AME or pilot / ATCO look for more information?

World Health Organisation

The WHO defines health promotion as “..the process of enabling individuals and communities to increase control over the determinants of health and thereby improve their health.”

What does ICAO say?

- Historically, the approach taken to managing the risks of disease / ill-health in aircrew has been based on detecting an increased medical incapacitation risk once a condition / disease has occurred / is known about
- The risk has been mitigated with the use of operational restrictions and suspension of certification
- There has been a shift in thinking with new guidance published which focuses on prevention of disease and ill-health, with the aim of minimising restrictions where possible and reducing the frequency and duration of medical certificate suspensions
- The guidance is focused on pilots but the principles can and should be applied to all individuals working in the aviation sector
- ‘Fitness to Fly’ – book published with input from ICAO, IFALPA, IATA

Why is health promotion important?

- Longer careers, ageing pilot population
- Increased annual flying hours and work-related demands
- Increased physical AND mental demands
- Increased financial pressures and worries

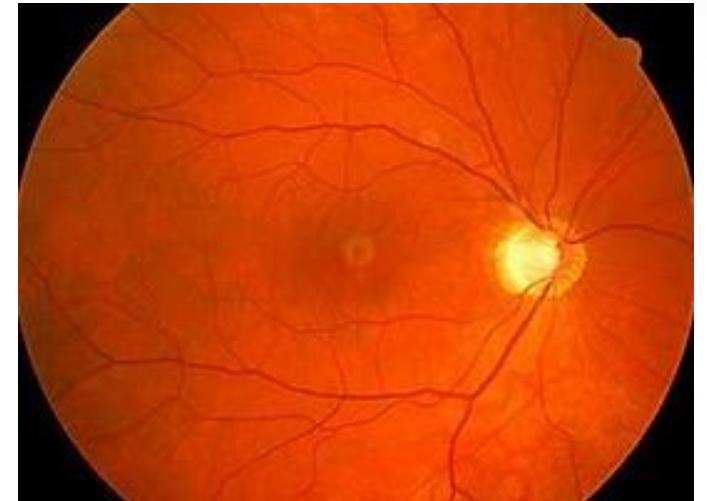
How can the clinical examination contribute to health promotion?

Why do we conduct a clinical examination of aircrew?

- To detect asymptomatic conditions that may result in incapacitation
- To review pre-existing conditions that might progress / deteriorate in-between medicals
- Pre-medical discussion to better understand the individual's current health
- Mental health/drug & alcohol screening questions
- General inspection
- Systems based review (cardiovascular, respiratory, musculoskeletal etc.)

Examination

- If we don't look (or listen!)....we won't find
- Develop your own routine
- It is helpful to ask yourself 'What am I looking for?' (remember, you are not being directed by a consultation / presenting complaint and applicants may be economical with any symptoms)
- CVS: BP, arrhythmias, murmurs, bruits
- Respiratory: Lung function tests? Look, feel, percuss, auscultate (smoker?)
- Abdo: Hernias, liver edge, spleen, urinalysis (diet and alcohol?)
- Skin: scars, melanomas (sun exposure?)



At each medical, ask yourself:

- Has the examination or pre-examination prompted me to discuss lifestyle and general health with the applicant?
- Have you read and responded to any cues on the application form such as alcohol intake?
- Is there an opportunity to relate any findings or discussions to health promotion?
- Have I made use of the valuable advantage of having seen and spoken to the applicant? (the Medical Assessor does not usually have this opportunity)

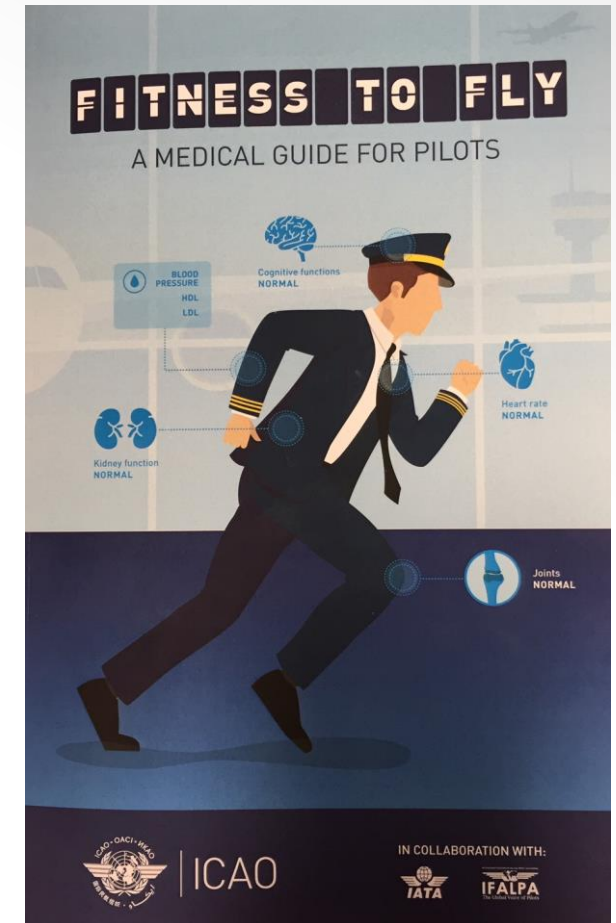
ICAO view

By promoting a healthy lifestyle it is possible to help ensure that pilots / ATCOs pose a minimal risk to safety from the beginning of their career until they retire. This can be accomplished if they:

- Maintain a healthy heart
- Develop mental health resilience
- Adopt a low risk strategy towards alcohol
- Avoid illicit drugs
- Adopt cancer avoidance habits
- Manage diet and weight
- Manage risks associated with accidental injury
- Get sufficient sleep
- Understand and reduce travel-related risks
- Protect their hearing and vision

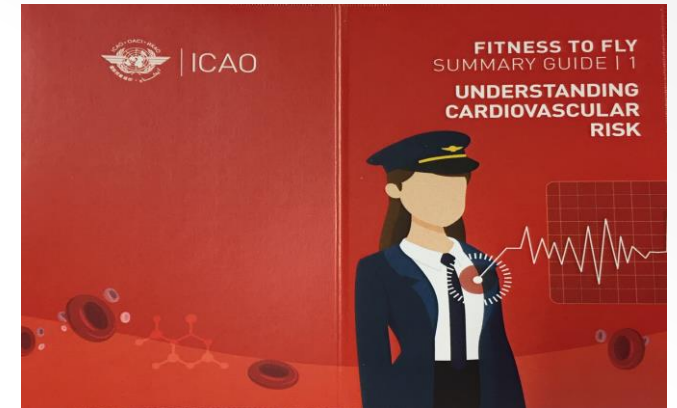
ICAO health promotion

- ICAO publication for pilots –this was recently distributed to all AMEs by the CAA
- Good practice to remind ourselves of the principles in a busy practice!
- Written by ICAO, IFALPA and IATA
- It explains the switch in emphasis from detecting and managing incapacitation risk with established disease to preventing this occurring in the first place
- AMEs are expected to deliver health promotion material to their applicants
- This book is pilot focussed, evidenced based and importantly..... realistic.
- In principal, it can be applied to all aviation workers



Understanding cardiovascular risk

- Get active – dose response (150 minutes moderate exercise vs 75 minutes intense)
- Understand your blood fat levels
- Manage your blood pressure
- Eat a healthy diet
- Maintain a healthy weight
- Understand the risk of diabetes
- Stop smoking
- Talk to your pilot / ATCO about why we are so interested in the CVS!
.....heart attack, stroke, hypertension, arrhythmias



How to keep mentally well

- Connect (relationships, friends, family, colleagues)
- Get active (150 minutes moderate exercise per week)
- Keep learning – this is associated with greater satisfaction and optimism
- Give to others – volunteering improves your mental well being and helps you connect with others (STEM)
- Be mindful – be more aware of the present moment, including your thoughts and feelings, your body and the world around you
- Know where to seek help - self help is not enough when you feel overwhelmed



Part MED updates - mental health assessment

Part MED.B.055 Psychiatry and Part MED.B.060 Psychology

Part MED.B.055 Mental Health (IRs/AMCs)

Notable changes in recent years:

- UK CAA guidance webpages updated
- Information on mental health assessment
- Updated depression and drugs and alcohol flowcharts (testing and management)
- Use of the SIC limitation
- Please review our website carefully to look for updated policy and flowcharts.
- Dispose of any flowcharts printed prior to 30th January 2019

Class 1 and 2 aeromedical history and examination

Class 1 initial assessment

- History and mental health examination to cover the areas described in AMC1 MED.B.055 (a) and GM1 MED.B.055

Class 1 revalidation/renewal assessment

- History and mental health examination to cover the areas described in AMC1 MED.B.055 (b) and GM1 MED.B.055

Class 2 assessment



- History and mental health examination to cover the areas described in AMC2 MED.B.055 (a) and GM3 MED.B.055
- “Guidance on Performing Medical Examinations” updated on our website
- Record sufficient detail in appropriate section on Cellma (box 225 or additional comments section)

Advice for Aircrew / ATCOs

Impact of alcohol and drugs on performance and health

- Understand the risks to your health and career by drinking alcohol
- Comply with your company's alcohol policy
- Set sensible personal drinking levels
- Learn about the amounts of alcohol in various drinks
- Spread your alcohol consumption- don't binge drink
- Have several alcohol free days per week
- Know how to mitigate the short term effects of alcohol when you drink
- Know where to seek help for yourself or a colleague
- Understand the risks to your health or career from non prescribed drugs
- Comply with your company drug policy
- Don't use any drug that is illegal



ALCOHOL	NON-PRESCRIBED DRUGS								
<ul style="list-style-type: none"> ☑ UNDERSTAND the risks to your health and career by drinking alcohol. ☑ COMPLY with your company's alcohol policy. ☑ FIND OUT the alcohol drinking guidelines in your country. ☑ SET SENSIBLE PERSONAL DRINKING LEVELS ☑ LEARN ABOUT the amounts of alcohol found in spirits, wine and beer, and between stronger and weaker drinks in the same category. ☑ SPREAD your weekly alcohol consumption over a few days. And don't "binge drink". ☑ HAVE SEVERAL ALCOHOL-FREE DAYS PER WEEK ☑ KNOW how to mitigate the short-term effects of alcohol when you drink. ☑ KNOW WHERE TO SEEK HELP for yourself or a colleague. 	<ul style="list-style-type: none"> ☑ UNDERSTAND the risks to your health and career from non-prescribed drugs. ☑ COMPLY with your company's drug policy. ☑ DO NOT PARTICIPATE in the use of any drug that is illegal. <p>MITIGATE THE SHORT-TERM EFFECTS OF ALCOHOL</p> <p>Alternate with water  Eat a meal prior to drinking </p> <p>LEARN ABOUT THE AMOUNTS OF ALCOHOL IN DIFFERENT DRINKS</p> <table border="1"> <thead> <tr> <th></th> <th>Spirits</th> <th>Beer</th> <th>Wine</th> </tr> </thead> <tbody> <tr> <td>% alcohol</td> <td>40%</td> <td>5%</td> <td>12%</td> </tr> </tbody> </table>		Spirits	Beer	Wine	% alcohol	40%	5%	12%
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Reducing the risk of developing cancer

- Stop smoking
- Eat a healthy diet
- Maintain a healthy weight
- Cut back on alcohol
- Avoid sunburn
- Get active (150 minutes moderate exercise per week)
- Reduce the risk of certain types of infection (HPV, Hepatitis, parasitic worms)
- Discuss with health professional which cancer screening test you should undergo



SUMMARY GUIDE TO PREVENTING CANCER

- ☑ **STOP SMOKING**
If needed, ask for help from your doctor.
- ☑ **EAT A HEALTHY DIET**
Your diet should include a wide variety of foods, in the right proportions (not just low in calories or sugar).
- ☑ **MAINTAIN A HEALTHY WEIGHT**
which requires a balance between food intake (energy in) and exercise (energy out).
- ☑ **CUT BACK ON ALCOHOL**
In relation to cancer, there is no "safe" amount of alcohol that can be consumed.
- ☑ **AVOID SUNBURN**
by staying in the shade, covering up and using sunscreen.
- ☑ **GET ACTIVE!**
Aim for a minimum of 150 minutes per week of moderate intensity exercise, or 75 minutes per week of vigorous exercise.
- ☑ **REDUCE THE RISK OF CERTAIN INFECTIONS**
(e.g. human papillomavirus; hepatitis; parasitic worms)
- ☑ **DISCUSS WITH A HEALTH PROFESSIONAL**
which cancer screening tests you should undergo.

PRACTICE REGULAR EXERCISE

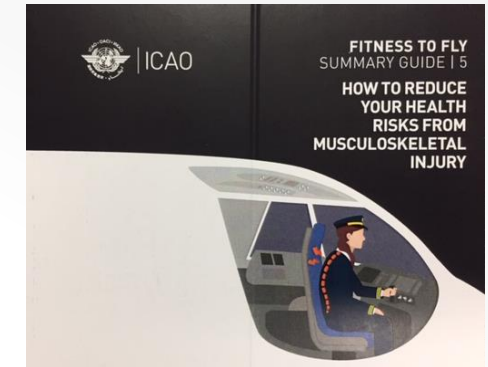
150 MIN/WEEK of moderate exercise
OR
75 MIN/WEEK of vigorous exercise

↓
SIGNIFICANT REDUCTION IN THE RISK OF 3 MAJOR CANCERS

-16-24% Bowel	-12% Breast	-20% Endometrial
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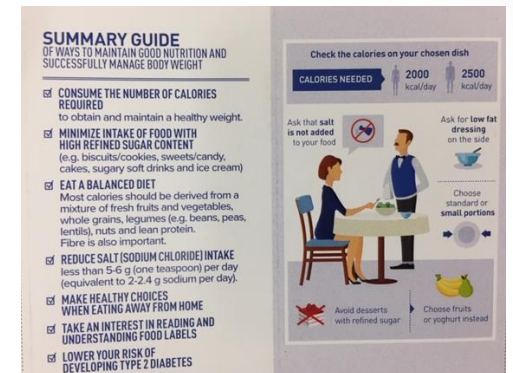
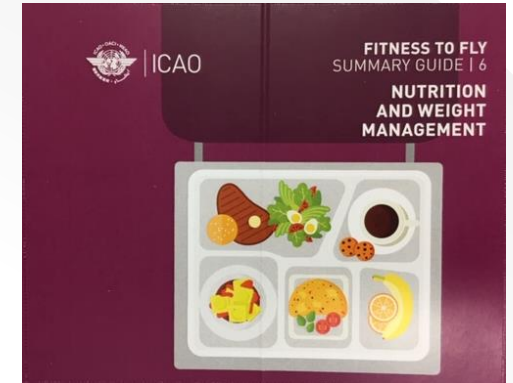
How to reduce your health risks from musculoskeletal injury

- Get active
- Build up levels of physical activity slowly
- Avoid exercise when feeling unwell
- Adopt an ergonomically neutral position
- Keep your back straight when lifting
- Maintain a healthy weight
- Take care to avoid accidents or falls (especially when tired)
- Stop smoking
- Sit less, move more



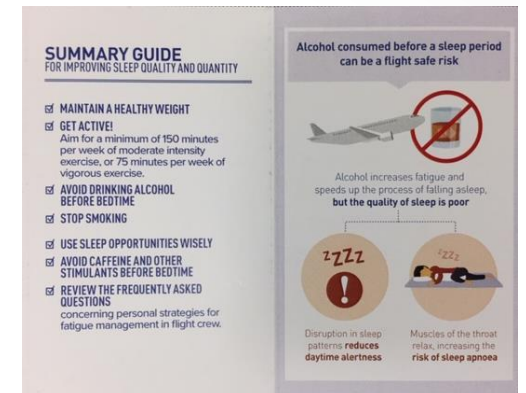
Nutrition and weight management

- Consume the number of calories required
- Minimise the intake of food with high refined sugar content (biscuits, cakes, sugary soft drinks and ice cream)
- Eat a balanced diet:
 - Most calories should be derived from a mixture of fresh fruits and vegetables, whole grains and legumes, nuts and lean protein
 - Fibre is also important
- Reduce salt intake
- Make healthy choices when eating away from home
- Take an interest in reading and understanding food labels
- Lower your risk of developing type 2 diabetes



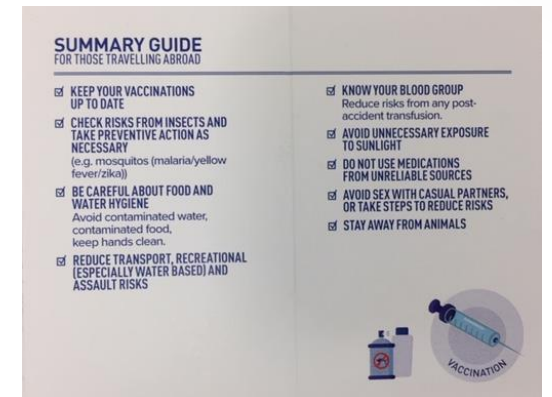
Sleep and the impact of medical conditions

- This chapter contains advice on sleep and the medical conditions that may affect it
- Maintain a healthy weight
- Get active – 150 minutes moderate exercise vs 75 minutes vigorous per week
- Avoid drinking alcohol before bedtime
- Stop smoking
- Use sleep opportunities wisely
- Avoid caffeine and other stimulants before bedtime
- Review the frequently asked questions concerning the personal strategies for fatigue management in flight crew



Travel health

- Keep your vaccinations up to date
- Check risks from insects and take preventative action as necessary
- Be careful about food and water hygiene
- Reduce transport, recreational (especially water based) and assault risks
- Know your blood group
- Avoid unnecessary exposure to sunlight
- Don't use medication from unreliable sources
- Avoid sex with casual partners or take steps to reduce the associated risks
- Stay away from animals



Hearing and vision

- Protect your hearing
- Keep the volume down
- Use ear protectors
- Don't fly with an URTI
- Don't fly if you can't perform a Valsalva
- Know first aid treatment for an URTI that occurs during flight
- See your doctor when you notice any hearing loss
- Reduce exposure to UV light
- Wear eye protection
- Eat a healthy balanced diet
- Reduce risk from diabetes
- Treat high BP, manage cholesterol levels, quit smoking



HEARING
HOW TO PROTECT YOUR EARS

- ☑ **PROTECT YOUR HEARING FROM:**
 - long duration background noise at a level where you need to raise your voice in conversation.
 - short duration loud noises (fireworks, gunshots).
 - exposure to noises that cause subsequent "ringing" in the ears (rock concerts, discos).
- ☑ **KEEP THE VOLUME DOWN** when listening to music on a personal device.
- ☑ **USE EAR PROTECTORS** on the pre-flight walk-round and when using noisy power tools.
- ☑ **DON'T FLY IF YOU HAVE AN UPPER RESPIRATORY INFECTION**
- ☑ **DON'T FLY IF YOU CANNOT PERFORM A VALSALVA MANOEUVRE**
- ☑ **KNOW FIRST AID TREATMENT** for an upper respiratory infection that arises in flight.
- ☑ **SEE YOUR DOCTOR IF YOU NOTICE ANY HEARING LOSS**

VISION
HOW TO PROTECT YOUR VISION

- ☑ **REDUCE EXPOSURE TO ULTRAVIOLET RADIATION (UV)** when undertaking risky activities.
- ☑ **WEAR EYE PROTECTION**
- ☑ **EAT A HEALTHY, BALANCED DIET** one that is rich in green, leafy vegetables and fish.
- ☑ **REDUCE RISK FROM DIABETES**
- ☑ **TREAT HIGH BLOOD PRESSURE**
- ☑ **MANAGE BLOOD CHOLESTEROL LEVELS**
- ☑ **QUIT SMOKING**

NOISE LEVEL REGULATION

An increase of 3 dB **DOUBLES** the sound pressure level

Occupational limit
82 dB(A)
85 dB(A)
88 dB(A)

acceptable for 16 hours | acceptable for 8 hours | acceptable for 4 hours

AMEs - Where to get help?

- Fitness to Fly book- photocopy advice cards
- Posters in your practice
- Online resources
- Watch it, try it, put it into practice
- Record as CPD, set as learning objectives etc
- CAA AME refresher training
- Peer groups
- Colleagues
- Encourage pilots and ATCOs to take a proactive approach to their health and ultimately their career

Summary

- Ultimately it is the individual's responsibility to take ownership for their health and well being
- BUT!..... We can encourage pilots and ATCOs to take responsibility for their health TODAY, not tomorrow
- Be able to guide and point in the direction of health promotion information

