

# OUTLANDING

The Taupo Gliding Club's Newsletter



## September 2022

Hi All,

*Welcome to another edition of Outlanding.*

*I recently recall saying that winter is almost over, but that couldn't have been further from the truth! We are actually in spring but you would be forgiven for thinking otherwise with some very chilly and wintery days. Flying conditions have not been brilliant for much of the year, but summer is coming!*

*Don't forget, the Northern Regionals will be in Taupo between 19–26 November. We are in need of wing runners for each day. If you are able to assist on any, or all of the competition days, please contact Tom.*

*Your club needs your support.*

*If anyone has an article or notification to be included into the next newsletter, please have to Trace by 25<sup>th</sup> of October 2022.*

*Fly well and have fun!*

*Cheers, Trace*

## Inside this Issue....

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## CFI Report by CFI Colin McGrath



The article 'Don't Smack the Mountain' (attached separately), I found in the training syllabus. It is very pertinent at the moment and quite entertaining. Everyone should read it, think about it, and apply it to their flying. If anyone is struggling to understand it please ask one of your friendly instructors.

Also, it is timely with the soaring season approaching for the following reminders:

**CURRENCY** - The MOAP requires the club to set Pilot Currency Requirements. Our requirements are, if the holder of a QGP, Soaring Pilot or higher has not flown for Three (3) months or more they must have a check flight before going solo or taking a passenger.

A post solo Student must have a check flight if they have not flown for a period of One (1) month or more before flying solo.

We must do a Daily Inspection (DI) on every aircraft every day we fly, Read and Sign the Tech log.

As we know that GME currently cannot be flown in the Taupo MBZ as the transponder is not working correctly. How do we know this? Because we read the minor defects page when we did the DI.

We also need to take pride in our fleet and clean them prior to flying. (And it's not just down to the duty instructor - but to everyone)

**CLUB RULES** – It is also a good time to brush up and have a refresher read of the club rules. These can be found under the Member section of the website and are our guidelines for a safe and efficient club operation.

## Some Do's and Don'ts by Trace

As we get back into the soaring season I thought it would be a good time to highlight some timely reminders. These are all in the Club Rules and need to be adhered to.



**DO** - Hang the tow ropes up at the end of the day so that the weak link is secured to the nail. This ensures that the link is visible and can be checked for any elongation.

**DO** - When attaching the tow rope to the tow plane, ensure the weak link is attached to the tow plane hook.

**DO** – Before you fly a glider for the first time — even if it has been flying all day — check to see if the DI book has been signed and the glider is within its serviceable time frame.

**DO** – Secure gliders when not in use



**DO NOT** tow the gliders with a rope that does not have the correct ring set up such as the rings in this photo.

**DO NOT** leave canopies open or unlocked.

**DO NOT** reach in through the small clear view window except to unlock and open the canopy.

**DO NOT** blow straight down the pitot or total energy probe, as this **WILL** damage the instruments'.

The above do's and don'ts are just an example - reading the club rules will ensure we are all up to date with the club's operations.

## Dehydration – by Dr Ken Wishaw M.B.B.S. F.A.N.Z.C.A.

Dehydration is an often forgotten factor in safety and performance in our sport.



**I'm thirsty**

As a medical specialist (anaesthetist), fluid physiology and fluid management is a central part of my practice every day.

Commonly I hear people only using water to counteract their fluid loss from sweating on hot days, obviously not realising that strict adherence to water only may in fact degrade performance to the point of being hazardous.

A few facts needed to be understood as to why this is so. If basic arithmetic and technical details turn you off, skip to

the recommendations!

Our blood and body fluids normally contain 135-150 millimoles (mmols) of sodium and 100 mmols of chloride per litre.

We probably sweat at around ½ to 1 litre per hour on a hot day while gliding. Additionally we lose water at high altitude from breathing air that has a low water content.

What we lose in sweat depends partly on our genetic makeup, but more importantly on whether we are acclimatised. The more acclimatised we are the less sodium and the more potassium we lose in our sweat. Sodium losses for a person that is well acclimatised is of the order of 5-30 mmols per litre. For someone who is not acclimatised (say an office worker who flies one or two days a week) sodium losses in sweat may be of the order of 40-100 mmols/litre.

(As a crude way of gaining an appreciation of these figures, one level teaspoon of table salt, which is just sodium chloride, dissolved in a litre of water equals approximately 100 millimoles per litre).

We do possess a very sophisticated sodium control system in our bodies that works well providing we are sufficiently hydrated to produce reasonable amounts of urine. Most of us readily excrete excess sodium in our urine. Conversely we also have a specific salt appetite. Glider pilots with low sodium levels often love salty foods at the end of the day!



Ingestion of water to replace sweat losses will decrease the sodium concentration in our blood, as we are not replacing the sodium that we are losing. Severe acute decreases in blood sodium (say 10%) may cause headaches, lethargy, apathy and confusion. Severe acute decreases (over 15%) may cause convulsions. While this is extremely unlikely to occur in our sport, cases of convulsions occurring in top athletes who only use water replacement are documented. Suffice to say even the mild symptoms are highly undesirable for a pilot!

Potassium losses may cause low blood pressure and weakness.

Small amounts of sodium and potassium in rehydration fluids increases the rate at which the gut can absorb the fluid. Drinking only water, apart from leaving you still dehydrated (because you haven't absorbed the fluid) can make you feel bloated and nauseous.

Pure water ingestion tends to shut off the thirst reflex, even when we are dehydrated.

Taste is a critical factor on whether athletes drink adequately during exercise. Some people love pure water, others loathe it.



High carbohydrate drinks such as energy drinks, fizzy drinks and fruit juice contain 10%-30% carbohydrate. Levels of carbohydrate over 8% inhibit intestinal absorption of the fluid. None of these are appropriate for rehydration during flight.

Sports drinks are not excessively high in sodium. At recommended strengths they contain 10-25 mmols/litre. They are also designed to replace potassium losses. They do contain carbohydrate but this is of the order of 6% which will not impede absorption or cause large fluctuations in blood sugar levels.

## Recommendations

Guiding principles (on the basis that you are essentially fit and healthy) should therefore be

- Do not take off already dehydrated. Remember ground preparation is sweaty stuff
- On short flights whether we drink water or an electrolyte replacement is not critical.
- On longer flights (say over two hours) we should be aiming to replace what we are losing. Sports drinks are appropriate for this. As we are a “light physical activity in a hot environment”, some dilution from the recommended concentration can be used if this makes it more palatable. Which one is not as critical as what tastes good to you.
- The carbohydrate (sugar) content is not harmful. Carbohydrate ingestion could only lead to a problem if a large carbohydrate load is taken at widely separated intervals, with the risk of insulin over secretion and low sugar levels occurring some hours later.
- Never take high sodium loads such as salt tablets.
- Food will help contribute to electrolyte intake
- Heavy coffee and tea drinkers are prone to severe headaches on acute withdrawal. Recent studies have shown that caffeine is not deleterious to sport performance and a small amount on the long flying day before or after the flight is OK.
- For the technically minded or undertaking long flying you should meet these three criteria at the end of the flight. Body weight loss should be less than 5%, urine colour should be pale (drugs and B vitamins can alter this) and urine volume should have exceeded 0.5 (ideally 1.0) mls per kilo per hour.



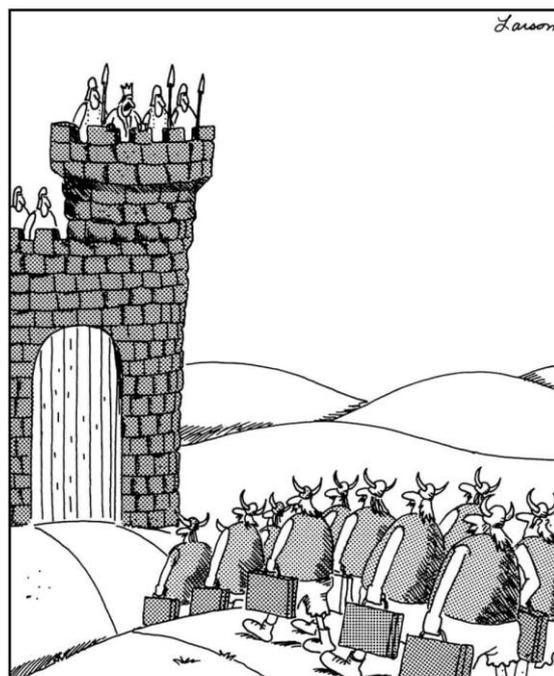
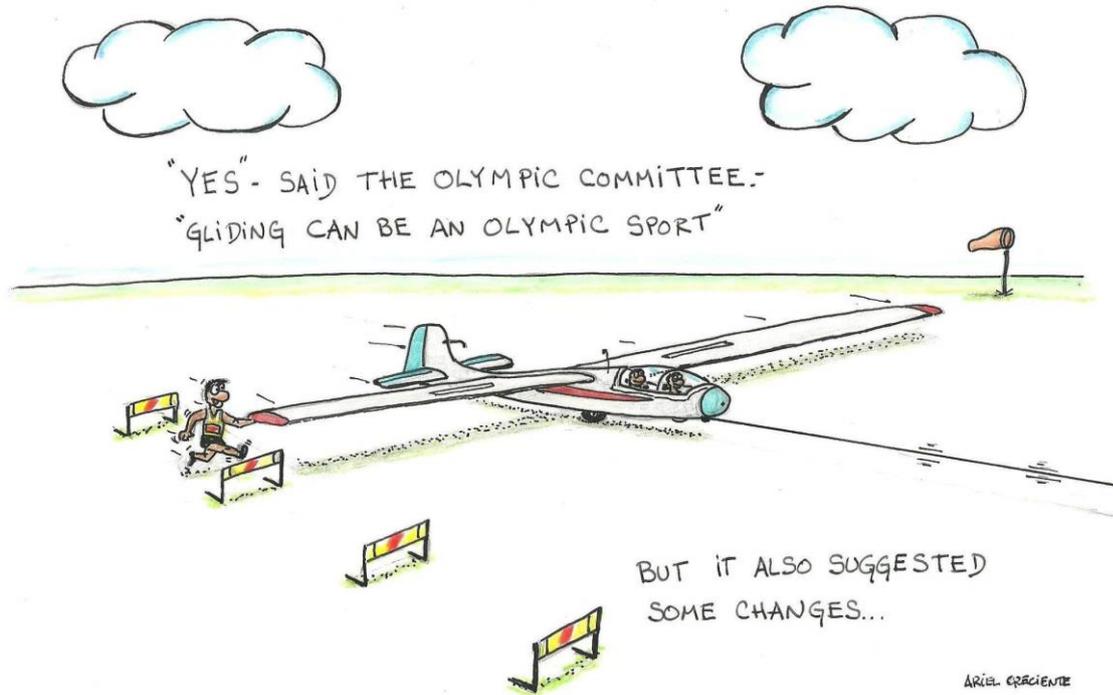
By way of example I undertook two seven hour mutual flights on successive days in a Super Dimona motor glider. Both days were hot and dry, and the tasks were identical.

On the first day I stuck to a water regime. By the end of the day I was nauseous, bloated had a severe headache, and mild dizziness. I opted to let the other pilot (and aircraft owner!) to do the landing. My urine output was very poor.

The following day was identical except that I used a half strength sport drink. At the end of the day I had none of the effects of the previous day (and a far healthier urine output). We flew and landed safely under my control!

## Humour

Check this link – [Funny Dutch Glider Commercial](#)



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"My God! Vikings! And they mean business!"