

# IMCZ NEWS



OCTOBER / NOVEMBER 2019



## EDITORIAL

Now that the nights are drawing in, and the weather is getting colder, it's time to think about our winter pursuits and park our summer passions for another year (unless you're planning a trip to warmer climes). For many of us it's a time to catch up on all those things which were postponed for summer outdoor activities. In my case I've a lot of catching up to do after another multi-month sailing season. For others their passion is winter sports; Skiing, snowboarding, ice hockey.... For you the best part of the year is just about to start.



From a club perspective, we can look back fondly on the triumph which was the 40th anniversary BBQ and begin to anticipate our annual tribute to **Robert Burns (Saturday 25th January, Brandenburg Waffensaal – put it in your diary).**

The upside of the autumn / winter season is that there are fewer reasons to miss out on our weekly Stammtisch Meetings, so I look forward to a renewed surge of enthusiasm in our membership and keen participation on Thursday evenings. Our thanks to the City Gardens / Park Hotel for their hospitality.

My thanks to all contributors to the Newsletter as always. I am very grateful for the time and energy they put into their interesting, and often thought provoking, contributions to make the Newsletter what it is. I hope you enjoy it.

A special thanks this month to Muthana who is helping me finalise the Newsletter for publication due to the limitations of IT while sailing. I have a bad conscience asking him, but as always, he readily agreed and gave his time freely. He is a star!

Alan

## Introducing... New members

### THE IMCZ WELCOMES:

#### Jens Kordetzky

Jens was born in Zug, Switzerland. After going through the local school system, including business school in Luzern, he "grew up" professionally with Ernst Young in Zurich and San Francisco as an auditor in the assurance department of the firm. He passed his CPA exam (Dipl. Wirtschaftsprüfer) in 1997. After Ernst & Young, he joined SonicWALL (a publicly traded and former DELL company) as a Senior Director of Finance in Sunnyvale, California. After spending 11 years in the US, Jens returned home and joined Landis+Gyr in Zug as their Vice President Finance, responsible for Group Accounting & Controlling. The company recently went through their IPO on the Swiss Stock Exchange. Landis+Gyr is known for its electricity meters and energy solution offerings. Jens is married to Cathy Sunshine and they have twins, a boy and a girl. Jens is a big ice hockey fan and a supporter and off-ice official for the local team EV Zug. Other activities include spending time with his family and winter sport activities such as skiing and ice-skating.



#### Timo Pitkänen

Timo was born in Estonia. Because his father Finnish origins, he spent his childhood in Estonia and Finland. At the age of 14 Timo started to work on weekends and summer holidays as a helper on construction sites. By the time Timo finished his MBA degree, traveled quarter of world and tried many occupations, he finally decided that he should follow in his father footsteps (he was carpenter) and started to study old buildings renovation and got his 3rd degree. Since then, Timo has been building and renovating new and old houses, doing everything himself: plumbing, carpentry, tiling, painting etc. Timo has three sons: twins Robert and Gregor (11) and Patrick (4) with his partner Elina, who is Graphic Designer. Both Timo and Elina are self employed, offering their services in Switzerland and abroad. Timo choose to live in Oberägeri, because he loves water and mountains. He loves hiking and snowboarding.



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## STAMMTISCH

Every Thursday from 18:00–20:30

At the City Garden Hotel

(or the Parkhotel when the CU Bar is unavailable)



## FUTURE EVENTS OCTOBER & NOVEMBER

This list is based on the status as of September 28, 2019. But things can change due to unforeseen circumstances. So please check regularly the event site at: <https://imcz.club/Club-Events>

### October 3, 17, 24, 31 • 18:00 – 20:30 Stammtisch, City Garden

The regular Thursday evening meeting for networking, relaxing and sharing experience and ideas about business and interests.



### October 10 • 18:00 – 20:30 Stammtisch, City Garden

The Special Stammtisch originally scheduled for this date has been cancelled due to the unavailability of the speaker. If any member has a subject they would like to present / discuss then please let Enrico know, otherwise this meeting will be a regular Stammtisch.

### November 7 • 18:00 – 20:30 Stammtisch, Parkhotel

The regular Thursday evening meeting for networking, relaxing and sharing experience and ideas about business and interests.



### November (Date TBC) New Members Reception, Im Hof, Zug

Good place to meet the new members that have joined the club during the last few months.

## PAST EVENTS

# Special Stammtisch, Thursday September 12, 2019

IMCZ Members enjoyed not one, but two interesting and unusual presentations at our last, well attended, Special Stammtisch in the City Garden Hotel. The planned presentation from Alpine Vault on **Investment in Gold** was preceded by an additional bonus presentation from Wydenc Capital. Craig, from Wydenc Capital, explained how institutional investors are struggling with the negative yields of today's traditional investments. The negative interest strategies of Central Banks has made investment in bonds virtually impossible. Shares bring their own risks, which many investors find unacceptable. Wydenc offers its clients managed crypto-currency investments and recommend that these should form around 3% of an overall investment portfolio.

Marc Deuster the founder, and Mike Roost the owner of Alpine Vault, introduced a new and innovative form of gold investment. Gold has long been recognized as a safe haven in times of trouble and uncertainty, however owing gold is not without its problems. Either you have to solve the logistics of safely storing your physical gold or you have to take the risk of paper gold not being backed up by physical gold when you want to sell your paper gold.



The answer? Leverage block-chain crypto-technology to tokenize real physical gold, which is stored in a safe place in Liechtenstein, namely the "Alpine Vault". Owners of the crypto gold tokens can exchange them at any time for the real underlying physical gold if required. Apparently, Switzerland does not allow tokenizing gold below the level of the physical granularity of the gold bars, whereas Liechtenstein does. Initially, both Wydenc and Alpine Vault are focussed on offering their services to large institutional investors and financial intermediaries. However, after a few years their services may also become available to individual investors like ourselves.



This proved to be an unusual, but most successful evening which provided a lot of food for thought. We would like to thank IMCZ Member Wolfgang Czepiczka for inviting the speakers and also the presenters themselves for introducing their companies.



Bill Lichtensteiger

## IMCZ BOARD MEMBERS

Thumbnail biographies of board members can be found on our website [www.imcz.club](http://www.imcz.club) under 'About Us' section

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## 40th Anniversary BBQ (1979 – 2019) Sunday, September 1st, 2019 Siehbachsaal, Chamerstrasse 33, 6300

This year our beloved annual BBQ was Brazilian themed. The Siehbachsaal was accordingly decorated with the Brazilian national colours: yellow and green. Helpers gathered at 8:30am at the Siehbachsaal. Everything looked promising but the weather, rain was threatening, so we decided to hold the event indoors. In record time, the tent, which could host up to 20 persons, was erected, tables were set-out and decorated, the audio equipment was installed, the bar and the place for the DJ's were set up and finally the decorations: Brazilian flags, balloons, and flags from countries around the world were put in place.

According to schedule, at 11:00am everything was ready to welcome the first attendees and the event got underway. The bar staff became very busy. The kitchen staff worked at full speed preparing potato salad, guacamole salad, coleslaw, cucumber & dill & tomato salad. The two expert grill-masters had put big pieces of meat: picanhas, brazilian entrecôte, marinated chicken and chorizo on the grill. Everything was ready for lunch on time. On a self-service basis, participants helped themselves at the "kiosks": salad buffet, grill, bar. After lunch it was time for the raffle. Roger Brooks ran the raffle draw, helped by a young girl. After a short pause for the dessert, Paulo Arend led the quiz and the prize-giving to the 3 winners. First place: Sean O'Sullivan. Then it was time for the highlight of the event, the Brazilian dance with 2 Brazilian girls: Wilma and Patricia. It was an electrifying samba display, just like at the carnival in Rio. The audience applauded enthusiastically. The show ended with general dancing. Beautiful.

Just a word about the participation. We had in total 90 attendees. 30 of which are Brazilians living in Zug. It was great to have you with us. There were also 19 children under 12 years. At the same time, they were celebrating the birthday of Jordana, Paulo's wife. Happy Birthday Jordana.

The event went very well and was enjoyed by all with the only real complaint being that the closing time of 4:00pm was too early.



Thank you to all those who contributed to the success of this event:

- My Samba Team
- The Ladies and Gentlemen at work in the kitchen
- The men at work behind the scene before, during and after
- The sponsors of the raffle prizes (Andy Habermacher, Bank Julius Bär, Bill Lichtensteiger, English Theatre Group of Zug, Golfers Paradise, GreenMotion)
- The Perfect Party of Valeria Goldschmidt
- Ron Sumners – Sumners Graphics – for the professional audio equipment and the photographs
- and last, but not least, to all for their happy participation

I hope I did not forget anyone. If so, please accept my apologies.

For more pictures please check the gallery  
<https://imcz.club/2019-09-01-Annual-Barbecue/105704015#photo>

**Enrico Dell'Angelo**  
IMCZ Events Manager



## Stammtisch at the Freiruum 15th August

The Freiruum which is now in full swing following its initial opening a couple of months ago, is proving to be a popular meeting place to drink and eat, as well as climb walls and jump around. The IMCZ decided to hold our Joint Stammtisch at the Freiruum last August and members of the ZIWC were invited to join. The evening proved to be a great success and we enjoyed a large turn-out, including many members from the ZIWC. IMCZ Members Ian Stansfield and Martin Wrathall were both on hand to feed us from their food stands. We were most grateful to Martin who brought out a range of his tasty pasta dishes for us to enjoy free of charge. We will be sure to arrange another Joint Stammtisch at the Freiruum very soon, so watch this space. We might even make this a regular event.

**Bill**



## Hike to Bachweg Brewery

On Saturday 21st September I lead a small but intrepid group of hikers from the "Spinnerei" in Baar, along the Lorze river and then up into the hills next to the Höllbach stream to the Bachweg Brewery in Edlibach, near Menzingen.



However, before we got started, meeting up hadn't been as straightforward as I had planned. I had given the meeting point as the corner of Haldenstrasse. When very few people appeared at the scheduled time, I had another look at the map, only to realise that Haldenstrasse goes right around the extensive Spinnerei site! After some minutes of confusion, we formed into two groups - an advanced party and a rear guard, who each set off independently, meeting up about half way when we stopped for coffee.

Fellow hikers included ZIWC President Jan Frei, IMCZ President Bill Lichtensteiger, Roger Brooks and his wife Margareta, René Welti, Michael Ballinger and new member, Jeremy Evans.

From the Spinnerei in Baar, we hiked along the relatively flat and tranquil river route as far as Höll (near the Höllgrotten caves), where we then stopped for about half an hour for a welcome coffee. Suitably refreshed, we embarked on the more challenging part of the journey, up the ravine which has been cut by the Höllbach stream over the millennia.

In contrast to the gentle walk along the river, the path takes a sudden upwards turn up into the hills after Höll. This got us all puffing and panting for about 20 minutes but we were rewarded with spectacular scenery, including steep cliffs, green vegetation and the ever-present sound of rushing water from the stream. Negotiating the, at times, loose shale of the path, we eventually put the steepest section behind us and arrived on a plateau, before the path turned upwards again for the final push through a field and one last rising section through woodland.

Emerging into bright sunlight in Edlibach, the warmth of the day and the exertion of the climb gave us a real thirst for the beer that awaited us at the end of our venture. Arriving at the brewery some minutes later, we weren't disappointed. The brewery had prepared a delicious spread of local produce, including dried meats, cheese from local cows and various other delights.

The brewery was established a few years ago by several Americans and some Swiss friends and is located inside an old barn, full of character with old, low beams. After an introduction from the brewery's Thomas Doebeli and his wife Connie, we then began the much anticipated craft beer sampling, tasting a wide range of the brewery's range, with such illustrious names as Hazed and Confused, David Hasselhop, Edlibach Steamer and the The Big Lebrewski, to name just a few.

Whilst not all the flavours appealed to everyone, I personally enjoyed them all. Everyone seemed to find a favourite and accompanied by the tasty food, it made a great end to the hike.

Whether it was the more strenuous second section of the hike or the mellowing effects of the beer, no one will say, but without exception, everyone choose to take the bus back to Zug!

**Jeremy Towler, IMCZ Member**





## External event of interest to IMCZ members

The 21st Century Orchestra presents Harry Potter in English with a live orchestra at the KKL. Members interested can contact them with the link below.

### Harry Potter and the Philosopher's Stone – in Concert

“You are a wizard, Harry”. It is the orphan’s eleventh birthday, and the half-giant Hagrid utters the words that will change Harry Potter’s life for ever. It turns out that the tender young boy with metal-rimmed spectacles and a scar like a lightning bolt on his forehead is not any old wizard: it is he alone who holds the defence against the dark arts of the wizard Voldemort. Joanne K. Rowling’s bestseller not only captured the imagination of an entire generation around the world, but as an eight-part Hollywood blockbuster also caused the hearts of cinema audiences to beat faster.

Over the next few years things will turn quite magical. The complete saga can be seen on large screen and with a live orchestra in concert halls and arenas. It started with the German premiere of Episode One “Harry Potter and the Philosopher’s Stone” in January 2017: one of the biggest cinematic successes of our times. At last, Harry Potter fans can follow the action in the concert hall. See how our hero masters his first adventuresome year at Hogwarts School of Witchcraft and Wizardry; watch him tread the strange corridors and moving staircases; see him compete on a broomstick during a game of Quidditch and fight all kinds of evil beasts, phantasmagorical creatures as well as his fellow pupils.

The complete movie with a live orchestra.

Emotions will be raised as the 21st Century Orchestra brings John Williams’ legendary film music to life, in all its dramatic aspects. This is where we hear “Hedwig’s theme” for the first time, a mysterious and gloomy waltz-like motif, and one which was to become a main theme in the following episodes. Guaranteed to raise goose bumps! A live event of the very best kind!

Film in English language with German subtitles  
21st Century Orchestra (<https://21co.ch/>)

Justin Freer, conductor

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## Coffee – a friend with benefits!

Contributed by Remo P. Jutzeler van Wijlen, Head R&D Sponser Sports Food Ing. Appl Food Sciences, MAS Nutrition & Health ETHZ



In a previous column, I outlined that there are nutrigenomic, gender, and age-related differences in caffeine metabolism. Meanwhile, several claims on caffeine's benefits on endurance performance, alertness, concentration and attention have been supported by the European Food Safety Agency (EFSA). Caffeine, at an intake level of 3-4 mg/kg body weight is proven to "increase attention and alertness" in the general population, and "to contribute to increased endurance capacity" in "adults performing endurance exercise". Now, estimating the needed dose for your next golf challenge or a tough office day brings an 80 kg person up to 240-320 mg of caffeine. An average cup of coffee contains between 60 to 100 mg of caffeine.

However, the claims authorised by EFSA did not consider the aforementioned genetic and nutrigenomic dependence of caffeine's effects. Whereas a far lower metabolism rate of caffeine than average (~ 80%) is well-established in children, it is less known that the clearance rate is also reduced in smokers (~ 30 to 50%). In contrast, caffeine is metabolised about twice as fast in women taking contraceptives than not taking contraceptives. By contrast, during the last trimester of pregnancy caffeine half-life is greatly enhanced (up to 15 h!). That's why it is recommended that pregnant women refrain from drinking coffee. Usually, caffeine levels peak about 1 hour after intake and fades out of our system within 3 to 4 hours.

That said, one must be aware that while caffeine's ergogenic effects are well-established, the evidence demonstrating these benefits is based only on mean population responses, and is not universally valid for each individual. Here's where nutrigenomics kicks in. There is substantial inter-individual genetic variation when it comes to caffeine metabolism and its concomitant effects on the body. Knowing one's genetic make-up would help to dose and time coffee/caffeine in order to optimally benefit and avoid or minimise potential negative side-effects. Some years ago, differentiation between individuals was limited to so-called "fast" and "slow metabolisers". For fast metabolisers, the consumption of 1 to 3 cups of coffee per day was related to a beneficial 3-fold decrease in myocardial infarction risk. On the other

hand, a 4-fold higher risk for slow metabolisers was associated with more than 4 cups a day. Importantly, it seems that these results only apply to people under the age of 50 years. No effect, positive nor negative, was found in older people.

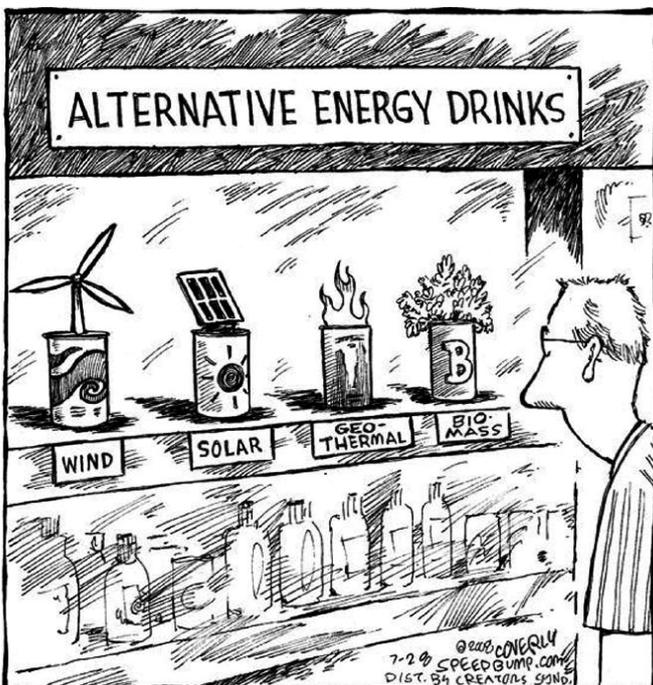
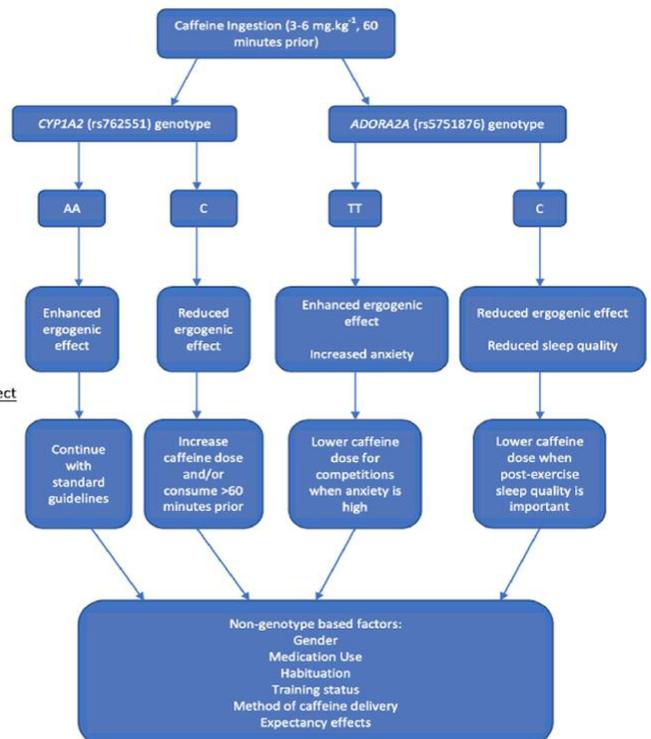
More recently, studies focussed on performance benefits rather than health outcomes of caffeine consumption. Contemporary evidence suggests two common genetic variations (polymorphism), in the genes named CYP1A2 and ADORA2A as important mediators regarding caffeine's metabolism and effects on performance. For example, individuals with the AA "form" (allele) of the CYP1A2 gene tend to produce more of a caffeine-degrading enzyme, and therefore metabolise it more quickly ("fast metabolisers"). Conversely, C allele carriers tend to have slower caffeine clearance. It is speculated that the far more common AA genotype accumulates caffeine metabolites faster, leading to a greater ergogenic effect. If correct, caffeine timing becomes important: it might not be that C allele carriers find caffeine less ergogenic, only that it requires longer for caffeine to be degraded to its ergogenic (performance-enhancing) metabolites (which are paraxanthine, theobromine, and theophylline). Similarly, the ADORA2A genotype variation modifies other mechanisms of action of caffeine like adrenaline activity, affecting anxiety and motivation. It is likely that more genes and their genotype variations are involved influencing the ergogenicity of caffeine depending on habitual caffeine use, time of day, race, age and sex.

At present, the best genotype-based advice on timing and dosage of caffeine, though only speculative, is given in the chart above. For the interested athlete, health enthusiast or concerned coffee consumer it may be an option to pick a provider of lab analyses and submit some saliva for genotype testing. Gene analyses are a growing business in the wake of personalised nutrition. Luckily, results from human genotype analyses hitherto seem to indicate that for most of us coffee will still remain a friend with the benefits of caffeine.

Guidelines

Genotype

Genotype Effect & Guidelines



## Risks to people from Mobile Phone Radiation

Contributed by IMCZ member, Alan Cattell

There is a lot of discussion in the press around the risks associated with mobile phones and the associated antennas. This has been intensified because of the introduction of the new fifth generation (5G) network infrastructure. In this article I want to shed some light on the facts around radio / microwave frequency electromagnetic radiation - what is known and what is not yet known.

### The concerns

The health concerns which I reviewed for this article are rather unspecific. People seem to be generally concerned about exposure to "radiation" and there are a lot of claims about effects on health which are more anecdotal than established. However, to get a clear view of the risks it's necessary to have a structured approach to the risk assessment. This is typically organised as follows:

1. Understand how the relevant radiation can interact with matter / biological systems
2. Conduct "high dosage" experiments in the laboratory to see what type of negative consequences arise from exposure well beyond the norm.
3. Gather data from human populations who use, or work with, equipment which works in the frequency range of mobile phones. This data should be collected over an extensive time period.

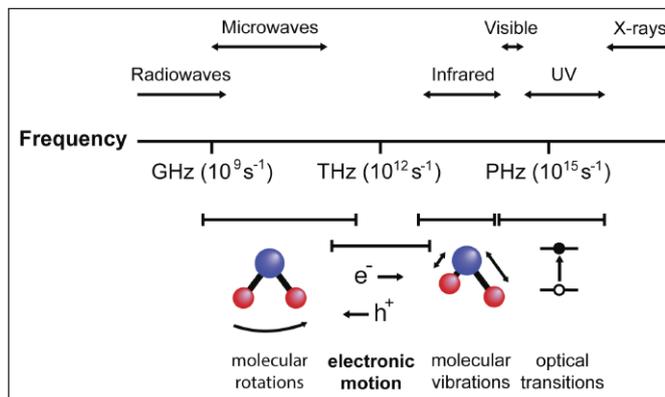
### Understanding radiation effects

The first thing to understand is that the radiation involved is electromagnetic (EM) radiation and is not ionising radiation. Gamma rays, X-rays and some UV have photon energies which are sufficient to break molecular bonds and damage proteins / DNA. This is not the case for mobile phone signals.

In the diagram below, the frequency range of 3G, 4G and 5G phones is outlined. (This frequency range is also that used for microwave ovens, WiFi, Bluetooth etc) This shows that the photon (quantum) energy of the radiation

involved is below one thousandth of an electron volt (eV), even for the highest frequency signals planned.

To be more specific, the diagram below shows the type of interactions which are possible. In the microwave region of the spectrum, absorption of EM radiation causes increased molecular rotation - which is equivalent to heat. You can see this from your microwave oven (which works at 2.4GHz, or 12 cm wavelength). The microwaves heat the food.



Is there something which microwaves can do to food that simple heating cannot? The clear answer is NO. From Boltzmann, we know that the thermal energy in a quantum system is approximately  $kT$ , where  $k$  is the Boltzmann constant and  $T$  is the temperature in Kelvin. At room temperature this is around 2 hundredths of an eV. What that means is that any possible quantum transition (energy state change, molecular disruption) from the microwave absorption will already happen due to the thermal energy in the system, which is at least 20 times greater.

That means that no quantum effects are possible with mobile phone radiation - any effect arising from mobile phone radiation is thermal.

From experience with high power microwave systems (e.g. radar), we know that exposure

to high power microwaves is dangerous and can be fatal. However, such systems work in the megawatt (MW) power range and phones typically work in the sub-Watt (W) range - more than 6 orders of magnitude lower power. So the question is, what is the safe power limit (both peak and average) at which there is no measurable effect on human health?

For context, the average person at rest produces around 100 W and the body obviously is adapted to lose that amount of energy (and more when active).

### Human sensitivity to RF / Microwave transmissions

There are people who claim to be sensitive to mobile phone / WiFi radiation and claim to be able to detect its presence. If this were the case, then the argument that interaction between human body tissues and these signals can only be thermal would be incorrect

(for some unknown reason).

In order to test these claims, a number of double-blind provocation trials have been performed in various countries by different researchers. In these tests, subjects who self-report as sensitive and "non-sensitive" subjects were exposed to defined radiation doses for a specific time. Whether the "dose" was real or non-existent was random and was unknown both to the trial participant and to those administering the exposure. The "sensitive" group and the control group were otherwise similar with regard to age distribution, gender and other factors. A typical example of this work is in reference 1 (Rubin et.al).

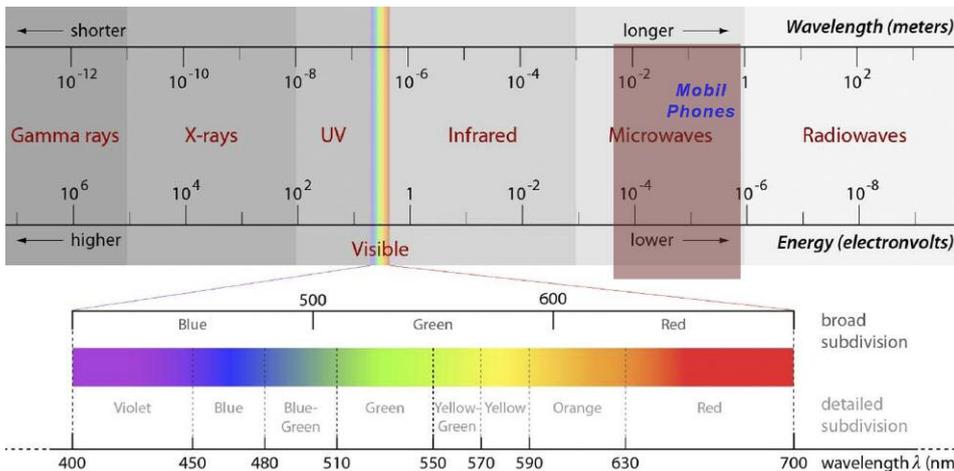
The clear conclusion from these trials is that the so-called "sensitive" participants are no more able to detect the EM signals than the non-sensitive people. Moreover, they are as likely to react adversely to a dummy (no) EM signal as to a signal. That participants experience real symptoms is not in doubt. However, the cause seems to be a placebo effect rather than some result of EM exposure.

### Nocebo Effect

Just as a placebo effect can cause an inert substance or effect to create a positive reaction, the nocebo effect is the opposite. For some people, simply being told that something will have a negative effect is enough to bring on real symptoms. While the placebo effect has been studied extensively, the nocebo effect has been largely overlooked.

### Lab Studies

Laboratory studies consist of exposing animals or cell tissue to EM radiation in the relevant frequency range and looking for



An electron Volt (eV) is the energy needed to move an electron to a 1V higher potential. It is  $1.6 \times 10^{-19}$  Joules.

changes compared to control samples not exposed. The applicability to humans is not clear, but they are useful worst-case studies.

The majority of the studies on animals (rats and mice) find no evidence of increased tumour development. Cell tissue studies have shown that EM radiation can cause changes which might help tumours grow. However, there is no evidence of tumour formation.

One report, however, created headlines! A study<sup>2</sup> (by the US National Institute of Environmental Health Sciences) exposed rats and mice to high levels of RF radiation (2G and 3G frequencies – 9 hours / day from before birth for 2 years – equivalent to 70 human years). These were whole body exposures and were around 1 to 4 times the maximum permitted local tissue exposure. In this study increased incidence of cancer **were** observed in male rats and this led to dramatic headlines in several newspapers as one might expect. However, there were a number of things which were overlooked in the reporting of the work:

- EM exposure was around 50 times the current maximum whole-body exposure
- The “negative” results were only observed for male rats: female rats and all mice showed no effect.
- The male rats which showed increased cancer rates **actually lived longer** than their “control” group!

So, what the study actually shows is that at doses 50x the whole-body limit, the risk to life is not measurable for rats and mice although some tumour development was observed in male rats.

## Human Studies

Studies on humans in real conditions would provide the best evidence of the risks of EM exposure. However, such studies are very difficult and often have large uncertainties in the results. That’s because one can’t (obviously) experiment directly on humans under controlled conditions. They don’t like it and it tends to get you prosecuted / fired / disbarred. One has to rely on epidemiological studies. Some examples include:

- Compare the incidence of cancer over many years in populations who have a cell-phone and those who do not.
- Collect information on cell-phone use for cancer patients compared with an equivalent population of people not suffering from cancer.
- Analyse any changes over time in the general population regarding tumour incidence.

As you can see, none of these studies could deliver completely unambiguous results, but if the risk were moderate or high, one would expect to see some evidence.

Some key results from the various studies include:

- Brain cancer sufferers report no more mobile phone usage than normal

- There does not seem to be any correlation between incidence of cancer and cell phone usage (as you would expect if there was a causal link – higher dose should mean more cancer)
- Some studies do show some possible links to cancer – but these studies have not been supported by the results from other groups.

The best conclusion for now is that there is no significant increased risk of cancer from 2G, 3G and 4G cell-phone use. This is supported by the absence of any substantial change in cancer incidence (allowing for age effects) with growth of cell-phone use.

## Radiation from phones vs. from cellular antennas

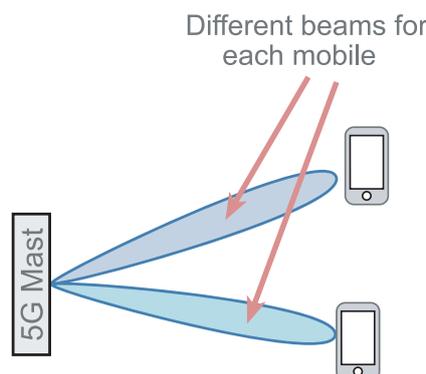
There has been a lot of discussion of radiation from antenna. However, it seems that not many people are aware that radiation from their own mobile phones can be much higher than from the cell towers, because of proximity. During roaming, when the mobile phone is searching for a nearby cell, it transmits max power. Due to the fact phones are often carried in trouser pockets they are physically very close to living body parts. Any adverse effect is therefore enhanced.

## 5G technology

One of the challenges in assessing risk is the difference in the timescales between new technology introduction and the time required to study the effects. (The NIH study mentioned previously took 10 years.) The introduction of 5G technology has raised some additional questions.

With the older standards, the antennas for the cells broadcast in every direction. With 5G this is not the case. Using beam-steering techniques it is possible to make connections to different handsets using the same frequency. This means that 5G antennas can support more devices per antenna than is possible with 4G. However, the consequence of this approach is that the signal strength does not fall off with distance from the antenna as sharply as with the older technology. This means that it is necessary to define power limits more carefully to avoid inadvertently exceeding the local EM radiation limit.

Fortunately, 5G technology alters the broadcast signal strength to the minimum necessary to get a reliable signal.



## Summary of medical risks

There is currently no convincing evidence of a link between EM radiation in the cell-phone range and damage to human health. It is clear that, if there is an effect, it is very low-level, well below the 1:10,000 range. However, some evidence exists from high-dose laboratory experiments which suggests there may be a very small risk. With new technologies continually being introduced it is important to continue to monitor the situation.

For anyone still concerned about the risk from Mobile Phone radiation, it’s easy to minimise exposure by taking a few simple mitigating measures:

- Use headsets rather than the phone directly (Class 3 Bluetooth headsets have a maximum power of 2.5mW, well below phone power levels and operate at 2.4 GHz)
- Don’t keep your phone on your body in one location (e.g. your pocket) all the time – put it on your desk (or similar) when not using it – but don’t forget it!
- Use your phone sparingly where the connection is weak. All phones increase their power level when connections are weak to get reliable connections.

Above all, remember that the research on risks is trying to find effects which have not been observed – and it is logically impossible to prove that something does not exist. All that is possible is to establish an upper limit of the risks.

## Other risks of mobile technology

There is a tendency for people to look at risk factors in a very limited way. If one focusses on the risk of cancer (and it is low), one may overlook other risks which are perhaps rather more significant.

There is now clear evidence that using mobile phones while driving increases one’s accident risk appreciably<sup>4</sup>. There are also many reported instances of people being distracted by their mobile phones, leading to death or serious injury<sup>5</sup>. Thus, mobile technology leads to lifestyle / behavioural changes which have some associated risk. These risks appear to be **far higher** than any possible risk to health from the EM radiation.

## Relative Risks

While it’s important to continue to investigate the risk of EM radiation as new wireless technologies are introduced, it’s also important to keep some sense of proportion regarding the magnitude of these risks. Many activities have risk associated with them, but life would be rather dull if we tried to avoid all risk.

So, when thinking about EM risks, remember how you enjoy being out in sunlight on a summer’s day (1000 W per m<sup>2</sup>- photon energy 10,000 times more than for a mobile phone) and don’t worry so much about the 1W power output (max) from your 4G phone.



## References

1. J Rubin; G Hahn; BS Everitt; AJ Clear; Simon Wessely (2006). [“Are some people sensitive to mobile phone signals? Within participants double blind randomised provocation study”](#). *British Medical Journal*. **332** (7546): 886–89
2. Cell Phone RF radiation, US National Institute of Environmental Health <https://www.niehs.nih.gov/health/topics/agents/cellphones/index.cfm>
3. There is a good summary of the risks of EM exposure on the American Cancer Society website: <https://www.cancer.org/cancer/cancer-causes/radiation-exposure/cellular-phones.html>
4. Rolinson et.al, [“What are the factors that contribute to road accidents? An assessment of law enforcement views, ordinary drivers’ opinions, and road accident records”](#) Accident Analysis & Prevention, Volume 115, June 2018”
5. Hye-Jin Kim et. al, [“Accident risk associated with smartphone addiction”](#), J Behav Addict. 2017 Dec; 6(4): 699–707

## A Night on the Moon

Contributed by IMCZ honorary member Muthana Kubba

The 14 Earth-days night on the moon brings with it freezing temperatures but also exceptional scenes. Provided one is encapsulated in a space suite or inside a space module with suitable viewing windows, the night sky is a fantastic treat. None of the 12 astronauts who actually walked on the moon’s surface have told us much about how our home planet appears from the moon. Of course they may be forgiven as they landed during the lunar day when the Earth was mostly showing its night side. Even the celebrated ‘Time Machine’ science fiction author, H.G.Wells did not waste one single word on our home planet in his epic “First Men on the Moon”. A pity, and to my mind a gross oversight.

To start with, Earth stays put on the lunar sky (or nearly so, there is a small amount of nutation – or wobble, due to the fact that the moon’s orbit is tilted by 5.9 degrees to the Earth’s equator). It does not move, day in day out, year in year out, century in century out, it is always at the same position in the lunar sky. A result of the moon being tidally locked, showing only one face to the Earth all the time. Where Earth is to be seen in the lunar sky, depends on where one is on the lunar surface. Near the equator, it will be in the zenith; near the poles, it will be close to the horizon etc.

During the long moon night, Earth would be visible all the time. If we count the new moon as day 1, then ‘Full Earth’ (as opposed to Full Moon) would be on day 1 and day 28. Full moon would be on day 14 by which time Earth would be invisible from the moon. In between the Earth would show phases just like the moon. During the Lunar night the Sun is behind the moon, i.e. the side of the Earth facing the moon would be receiving full sunlight. Similarly, the Earth would be invisible as seen from the moon during Full Moon. Since the diameter of the Earth is almost four

times that of the moon, its brightness is 13 time more than that of the full moon. In fact, one can almost see one’s shadow there at full Earth.

### The Lunar Night Sky

Those who have had the good fortune to see the night sky on Earth whilst in the middle of a desert can understand how the lunar sky would appear. I will never forget an experience I had when I was a 13 years old. We were in the middle of the desert, when we stopped to help a motorist who needed help. We were on our way from Baghdad to Lebanon to spend the summer there and escape the summer heat of Baghdad. Once I got out of the car and walked away from the commotion, and as soon as my eyes adjusted to the darkness of the night, the sky virtually exploded with trillions of “chandeliers”, so bright and so apparently near, as I had never seen them before. The Milky Way, Orion, the Great and Small Bear with its Northern star, the Pleiades ... a treat which I will never forget all my life. Imagine a scene like that with Planet Earth adorning it right in the middle, four times bigger, and 13 times brighter than the Moon.

The cloud covered Earth rotating slowly with Japan and Siberia just visible through the clouds, and a couple of hours later India appears followed by the Arabian Peninsula and Turkey, Europe and the UK next, the Atlantic, Canada, the US and all South America then the Pacific all in the 24 hours of day 7 of the Lunar night. An unforgettable sight with the beauty of our home planet. A true. and as far as we know, the only oasis of life in the Universe.



### Phases of the Earth

As mentioned above, As seen from the Moon, Earth shows phases just like the Moon’s.. Starting with a Full Earth on 1 of the of the Lunar month, it will be waning gibbous on following days and becomes a half crescent on day 7. On day 14 it becomes invisible and so on.

Of course, Earth will be still visible during the lunar day, just as the Moon is visible on Earth in broad daylight.

To do justice to such a unique celestial phenomenon is important. especially due to the planned missions to send men back to the moon. NASA, the Chinese and the Russians are all planning to send men there in the next decade. It may be getting crowded up there soon.

### Further Reading

1. Observing Earth from the Moon <https://www.skyandtelescope.com/astronomy-blogs/explore-night-bob-king/observing-earth-from-the-moon/>
2. Earth Phases [https://en.wikipedia.org/wiki/Earth\\_phase](https://en.wikipedia.org/wiki/Earth_phase)
3. Brightness <https://medium.com/starts-with-a-bang/ask-ethan-how-bright-is-the-earth-as-seen-from-the-moon-627eb1554ca9>





## Cruising the Caribbean Falmouth, Jamaica

Contributed by IMCZ Webmaster Roger Brooks

Our last port of call before returning to Ft. Lauderdale was Falmouth, Jamaica.

### Jamaica

Jamaica is part of the same (mostly underwater) mountain range which also includes Cuba and Hispaniola (divided between Haiti and the Dominican Republic). It is thought to have originated from vulcanism about 40 million years ago. Human habitation is thousands of years old, but little is known about the earliest inhabitants. The indigenous population at the advent of Europeans was Taino (also called Yamaye). The Taino descended from the Arawaks of South America and populated most of the Greater Antilles starting in the 8<sup>th</sup> century.

The first European visitors came to Jamaica in 1494 on the second voyage of Christopher Columbus to the New World. Few of the Taino survived the brutal treatment by the Europeans, who tried to enslave them, and even fewer survived the unfamiliar diseases they brought with them. The Europeans, having little success in enslaving the natives, imported slaves from

Africa to work the land, starting in the 16<sup>th</sup> century. Many of these slaves escaped and formed remote communities called Maroons, together with freed slaves and surviving Taino. When the British ousted the Spanish in the 17<sup>th</sup> century, the Spanish freed their slaves, swelling the ranks of the Maroons. Nonetheless, the British maintained a successful plantation economy based on slavery, sugar, coffee, cotton and indigo until the mid-19<sup>th</sup> century, when slavery was finally abolished.

As many former slaves were unwilling to continue working the plantations, colonists resorted in the 19<sup>th</sup> century to the employment of Asian immigrants, mostly indentured servants from China and India. After a brief period of membership in the [Federation of the West Indies](#), Jamaica became fully independent (though still a member of the British Commonwealth) in 1962. Agriculture remains the top employer in Jamaica, with fruit (primarily bananas), cocoa, spices (primarily ginger), pimento and sisal joining the traditional heavyweights, sugar (and its

derivatives, like molasses and rum) and coffee, as important exports. Another important export is bauxite, most of which is shipped to Iceland for processing into aluminium. However, tourism is now the top source of income in Jamaica.

### Falmouth

We made port in Falmouth, the capital of Trelawny Parish. This is the easternmost parish in Cornwall County, adjacent to Saint James Parish, with the better-known capital of Montego Bay. Falmouth was founded by Sir William Trelawny, then the Governor of Jamaica, in the 18<sup>th</sup> century. He named it after his birthplace in Cornwall, England. It was a planned city and had running water before New York City. Owing to the extensive plantations in Trelawny parish, it was a primary port for sugar export throughout the 18<sup>th</sup> and 19<sup>th</sup> centuries. It was also home to one of the largest Maroon communities. Due to economic decline following the abolition of slavery, much of the Georgian architecture in Falmouth has been preserved. Due to an ironic twist of fate (shared by Zug and Murten) the fact that they had no money at a time when other communities were redeveloping saved many old buildings from destruction. However, the port was recently redeveloped. It is now a gated, artificial paradise, popular for cruise ships, featuring numerous shops for tourists and an outpost of Jimmy Buffet's "Margaritaville" chain of bars & restaurants.

We disembarked early and took a modest tour on foot, visiting one of the remaining icons of Georgian architecture, the Falmouth Courthouse. The courthouse was built in 1815 and then rebuilt in nearly identical form after it was destroyed by fire in 1926. Since it was early, there weren't yet many people on the streets, and the air wasn't yet too hot. Although we were accosted by a few locals, mostly hawking services rather than wares, they readily accepted a polite "No, thank you", unlike those I had encountered long ago on Jamaican beaches. We didn't have much time to look around further, as we had booked a tour to the nearby Green Grotto caves to escape the heat. We boarded a minivan with a cheerful Jamaican driver, who entertained us with chatter and a little video from the film "Cool Runnings" (based on the entry of Jamaica into the Olympic bobsled competition in 1988) during the 40-minute ride to the Green Grotto. His signature phrase was, "In Jamaica, we don't have problems. We have situations, and we know how to deal with them." On the way, we spotted a cargo ship loading bauxite.

Port of Falmouth



Port of Falmouth





*Bauxite Loading Terminal*



*Green Grotto Caves*



*Green Grotto Caves*



*Green Grotto Caves*

## Green Grotto Caves

This system of limestone caves occupies an area of around 25 hectares in St. Ann, near Discovery Bay, which is thought to be the site where Columbus landed in 1494. The caves are over 1.5 km long and 12m deep. The history of human usage of these caves goes back centuries, if not millennia. The Taino are known to have lived in the caves centuries ago. Nothing is known about earlier human habitation, but it seems likely. During the colonial era, pirates used them to hide their booty and runaway slaves used them to hide and escape. The Spaniards also used them to hide from the British when they invaded in the 17<sup>th</sup> century and found a tiny tunnel, 3 km long, through which they escaped to the sea escape. In more recent times, the caves were used to smuggle arms to Cuba between the World Wars, to store rum during the Second World War and as a bar, club and lounge in the late 20<sup>th</sup> century. The Ian Fleming novel "Live and Let Die", as well as the eponymous 1973 movie (in which Roger Moore made his debut as James Bond), used the caves as the lair of Kananga, the archvillain. In 1999, the government realized that the use of the caves as a night club was causing them to deteriorate and made them into a tourist attraction with more carefully controlled access. It has meanwhile gained Platinum certification for sustainability from EarthCheck.

For the tour we were provided with hard hats and a friendly and well-educated guide. The caves are well furnished with paths, bridges and stairs and dramatic lighting is featured at



*Escape Route*



*Green Grotto Caves*

strategic points. They are divided into two parts, Runaway Cave (see above) and Green Grotto. There are numerous “light holes”, through many of which tree roots descend to find soil. The pièce de résistance is the underground lake in the Green Grotto, which is reached by descending a ladder. The water is crystal clear and home to numerous critters, most of which are, however, too small to be readily distinguished, even with the artificial lighting provided. When the lights are extinguished, it is pitch dark. The grotto is also home to 9 of the 21 species of bat found in Jamaica. Our guide ended the tour by rendering “Mr. Bombastic” to the accompaniment of his drumming on a resonant limestone shelf. The caves are set in a lush landscape with interesting local flora, such as the Menorah-like Jerusalem Candlestick.



*Tree Roots in Green Grotto*

## Return to Port

On our way back to port, we watched a bit more of “Cool Runnings”. At the port, we perused the shops but didn’t find anything extraordinary, so we re-boarded our ship and prepared to return to its home port.

## Further Information

This video provides some more interesting background information as well as good recordings of the bats and the drumming:

[Planet D Video on YouTube](#)



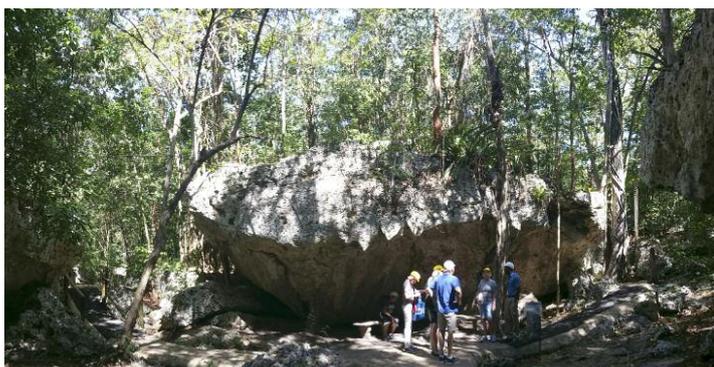
*Underground Lake in Green Grotto*



*Underground Lake in Green Grotto*



*Guide Drumming*



*Tour Group at the Mouth of Green Grotto Caves*



*Jerusalem Candlestick*

## The Pampered Hiker – Easy & Scenic Hikes with a Bit of Luxury

Contributed by IMCZ Sports' editor Joseph Dow

Having had my share of airy “hikes” on narrow, exposed ledges overlooking precipitous drops, I decided to take it easy and try to mix-in a little comfort this summer. I imagined no white/blue/white Alpinwanderweg markers, no snow fields, no ladders, no stale trail mix; just leisurely walking amongst pretty mountain flowers, scenic vistas, and harmless furry critters. The perfect locations for this desire were Zermatt and St. Moritz. My choices of hiking objectives were a hut up on a mountainside above Zermatt, an isolated village in the shadow of the Matterhorn and a mountain between St. Moritz & Pontresina.

Once, while dining, I had noticed a lit structure high on the pitch-black mountainside overlooking Zermatt. I couldn't figure out what it could be and imagined it the lair of some diabolical globalist billionaire. Is George Soros a skier or snowboarder? The **Bergrestaurant & Pension Edelweiss** is perched on a seemingly vertical wall on the mountain surrounding the village. Notwithstanding its location, it is not a particularly difficult place to reach on foot. Not too far away, **Zmutt** is an isolated village below the north face of the Matterhorn. Despite the dark imposing wall, the tiny village is quite sunny and full of flowers.

Over on the other side of Switzerland, **Muottas Muragl** is a hiking paradise on a mountain located between St. Moritz and Pontresina. On winter ski trips, I always noticed the distinctive funicular but never got up there because it is not a ski area. A delightful and cosy hotel tops the upper station at 2,454 m ü.M and scenic vistas and easy hiking choices are available, year round.



Muottas Muragl

### Muottas Muragl

(between St. Moritz & Pontresina)

#### Hiking

The hiking on Muottas Muragl is not overly aggressive, although I would suggest at least light hiking boots. From the hotel, two main routes are either a straight-shot to the lake, Lej Muragl, or the Panoramaweg, around the slopes of the Blais da Muottas.

Attempting to take a shorter and easier route from the Panoramaweg, I headed up to the Segantini Hut, disregarding the 500m vertical sign. After hiking for what seemed like an

hour, the next sign emblazoned with “400m remaining” was a most unwelcome sight. I made it to the top just in time to get completely drenched in an un-forecast thunderstorm while just five minutes from the hut.

#### Scenery and views

The route to Lej Muragl provides stunning views of the towering Piz Muragl all along the way. The lake itself is beautiful, with its blue-green glacial waters and partially-melted ice suspended from the surface.

The Panoramaweg boasts spectacular views of the Upper Engadine Valley, St. Moritz and Lej da San Murezzan. Besides the commanding view



Edelweiss Huette Zermatt



Lej Muragl

of the valley and city, Piz Bernina with its signature white ribbon of snow, the Biancograt, and Piz Palù are also visible.

On both routes, you may see marmots right on the paths and Steinbock from a distance.

### Food on the mountain

The Romantik Hotel has a proper gourmet restaurant. Unfortunately, I chose the Schwarz Paella, not realizing it is a dish similar to traditional paella but with inky octopus in various forms as the main ingredient. However, other dishes looked quite appetizing.

Other than food from the hotel itself, the offerings on the mountain are limited to a few

snack bar-type locations. Reaching the upper shack, the Segantini Hut, I was surprised that the 6 CHF coffee was made with instant coffee. Yuck!

### Hiking Routes

**Panoramweg:** From the hotel, this path circles around below and away from the hotel and proceeds to a vantage point above the town of Pontresina. It is possible to go all the way to Alp Languard, but that was too long a walk for my plans and I took the shortcut up to the Segantini Hut, winding back to the Romantik Hotel.

**Lej Muragl:** From the hotel, this path head straight and mostly level along the top of the

mountain towards the lake with Piz Muragl ahead on the right side.

### Hotel

**Romantik Hotel Muottas Muragl:** The hotel is cosy and has a modern feel with traditional aspects maintained, such as the particular wood they use in the rooms. The wood is a unique feature of the building and you are given a small cloth bag with wood chips (with a pleasant aroma) to remind you of your stay.

### Travel

**How to get there:** By SBB train, Zug – Zürich – Landquart – Samedan – Punt Muragl. Just under 4 hours. The hotel is reached by the funicular railway.



Romantik Hotel MM



Punt Muragl

## Edelweiss & Z'mutt

(around Zermatt)

### Hiking

Similar to the hiking around Muottas Muragl, the hiking up to the Bergrestaurant & Pension Edelweiss and over to Zmutt is relatively easy. It can be quite hot, however, as you are hiking at lower altitude, just up from the village at 1'620 m ü.M. The climb to the Edelweiss up at 1'961 m ü.M is steep but not technical and is less than an hour from the town on a well-prepared, safe path.

The hike up over and down to Zmutt can be combined with the hike up to the Edelweiss, but I did it on a separate day from a lower approach.

### Scenery and views

All along the pathway up to the Edelweiss are the best views of Zermatt you can find. Forest, a waterfall and typical Valaisan farming structures line the way. The walk over to Zmutt is a bit rocky without trees, but with nice views of the Matterhorn from an angle not usually seen without skis.

### Food on the mountain

**Bergrestaurant Edelweiss** – The Edelweiss has a nice restaurant with a well-regarded carrot cake and full meals. I only had a drink, but others said the food was good.

**Restaurants in Zmutt** – There are a number of restaurants in Zmutt and I had a pleasant lunch at the Jägerstube Zmutt consisting of famer's Rösti, which was surprisingly light and quite tasty.

### Hiking Routes up to the Edelweiss & over to Zmutt

**Edelweiss:** From directly within the town, just off the main street, a path leads straight up to the hut.

**Zmutt:** Zmutt can be reached after accessing the Edelweiss or you can take another route directly from the town, near the church. There is also a lower route from below the lift station of the Matterhorn Paradise.



Zmutt

### Additional information:

**Edelweiss Bergrestaurant & Pension**  
 Edelweiss: [edelweiss-zermatt.ch](http://edelweiss-zermatt.ch)

**Zermatt Tourism - Edelweiss:**  
<https://www.zermatt.ch/en/Media/Restaurant-s-bars-clubs/mountain-restaurant-Zermatt-Edelweiss>

**Zermatt Tourism – Z'mutt:**  
<https://www.zermatt.ch/en/Media/Attractions/Hamlet-of-Zmutt>

**Jägerstube Zmutt:**  
<https://www.zermatt.ch/en/Media/Restaurant-s-bars-clubs/mountain-restaurant-Zermatt-Jaegerstube-Zmutt>

**Parkhotel Beau Site Zermatt:**  
[parkhotel-beausite.ch](http://parkhotel-beausite.ch)

**Muottas Muragl:**  
[https://en.wikipedia.org/wiki/Muottas\\_Muragl](https://en.wikipedia.org/wiki/Muottas_Muragl)

**Swiss Tourism:**  
<https://www.myswitzerland.com/en-us/destinations/muottas-muragl/>

**Romantik Hotel Muottas Muragl:**  
<https://www.mountains.ch/en/romantik-hotel-muottas-muragl>

**Hotels:** [Booking.com](http://Booking.com)

**Weather:** [srf.ch/meteo](http://srf.ch/meteo)

**Rega:** [rega.ch](http://rega.ch)

**Next Edition:**  
*Ski tips for the upcoming season.*  
**Think snow!!!**



Zermatt fr. Above

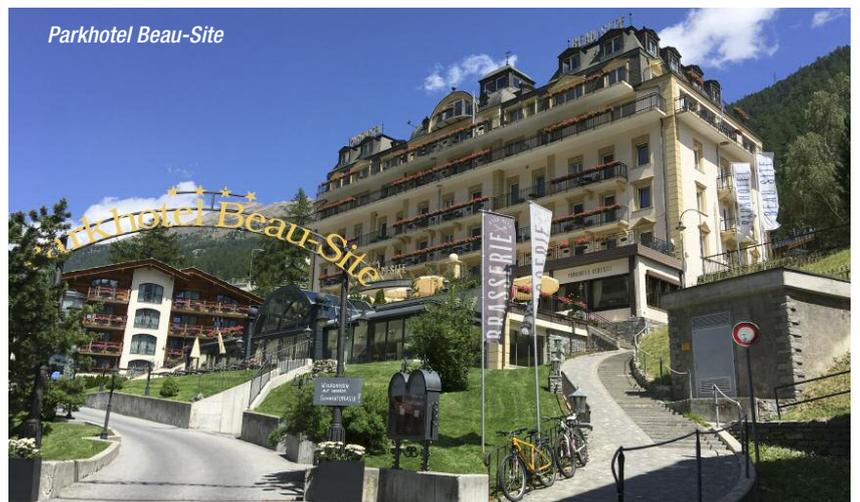
### Hotel

**Parkhotel Beau Site:** This historic grand hotel, sits at a high position at the edge of the main part of Zermatt. Luckily, when I checked in and entered my room, an Italian painter was renovating it, which led to a nice upgrade. My balcony ended up being a major part of the restaurant's roof with a commanding view of the town. The Brasserie "Beau Site" is excellent with many gourmet choices and a fantastic dessert buffet. The chocolate mousse was particularly delicious.

### Travel

**How to get there:** By SBB train, Zug – Bern – Visp – Zermatt. Just under 4 hours.

For a relaxing encounter with Mother Nature, I highly recommend both of these world class destinations!



Parkhotel Beau-Site

## Winning by not losing

Contributed by Alasdair Burnie, IMCZ Member, Elgin Group LLC

Following on from my previous article in the IMCZ August/September edition, the original intention of the current article was to cover both the “do’s and don’ts” of creating a robust portfolio but, as space is limited, I shall focus on the don’ts and leave the do’s for the next edition.

In investing, like in many other disciplines including sports, it pays to defend well. That is, it is just as important to avoid some “losing” habits, as it is to adopt “winning” ones.

So, what should we avoid? The following is by no means an exhaustive list, but from our (Elgin Group) experience, if one avoids the following, one will protect oneself from possible future pain and regrets.

### 1. Do NOT act on what either scaremongers or cheerleaders advise

Marketing in finance is the same as in any other field. To attract attention, people that are trying to sell to you often resort to creating either fear or greed as it is easier to make headlines. Much of this advice comes from prominent and generally well-respected sources.

For example, since the beginning of August, there have been many experts calling for a recession in the US in the next year or so. Jeffrey Gundlach, often referred to as the “Bond King” said on August 9th that there is a “75% probability of a recession before November 2020” (so buy my bond fund). A week later, Ray Dalio, who runs the biggest and one of the most respected hedge funds called for a “40% chance of a recession before the US election” (so buy my hedge fund). Calls like these may prompt investors to run for the hills. Indeed, the UBS CEO said recently that their Wealth Management clients are holding large amounts of cash, as they are afraid of big market drops, and on July 25th a JP Morgan Asset Management strategist on CNBC called for “a significant selloff in equities in Q3”:

## JP Morgan warns of a ‘significant’ sell-off in US stocks this quarter



PUBLISHED THU, JUL 25 2019 - 12:32 AM EDT | UPDATED THU, JUL 25 2019 - 5:02 AM EDT

Well, it did not happen...

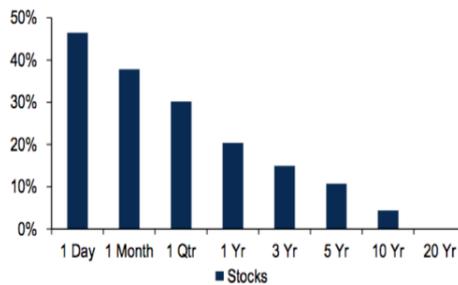
In the same vein, one should not be affected by perennial bulls, especially those that put ridiculous price targets on some stocks, or those newsletters who tell you they will show you how to double and triple your money if you subscribe...

### 2. Do NOT react to breaking news, especially if it’s bad news.

It is easy to react on bad financial news. We are all human and when our portfolios drop suddenly, we want out. Indeed, behavioural economists say that the pain of losing is more intense than the joy of winning. As such, investors often head for the exits when bad

news causes the markets to drop sharply. Merrill Lynch has looked at the probability of losing money in the US market depending on how long one is invested. They found that the probability decreases dramatically the longer one remains invested.

PROBABILITY OF NEGATIVE RETURNS IN



Source: BofA Merrill Lynch US Equity & Quant Strategy, S&P

THE US EQUITY MARKET 1971-2018

### 3. Do NOT try and time the markets

Of all the mistakes investors make – be they individual or professional – the belief that they can time the markets is one of the costliest. In other words, they are confident that they can sell broad market funds or individual stocks before they fall, and get back in before they start to rise. We are not aware of anyone who can do this consistently, and if they could, they would only manage their own money and tell no one. Below is another graphic from Merrill. The middle column shows the US market’s returns for each decade since 1930 and the right column shows what the return would have been if one missed the 10 best days of each decade. Yes, 72% might be a worst-case scenario, but most market timers would certainly have made a lot less than the 13,189% that the markets gave.

ALWAYS INVESTED VS MISSING THE 10 BEST DAYS OF EACH DECADE

Decade	Price return	Excluding best 10d per decade
1930	-42%	-79%
1940	35%	-14%
1950	257%	167%
1960	54%	14%
1970	17%	-20%
1980	227%	108%
1990	316%	186%
2000	-24%	-62%
2010	156%	75%
<b>Since 1930</b>	<b>13,189%</b>	<b>72%</b>

Note: Latest decade as of 8/6/2018  
Source: S&P, BofA Merrill Lynch US Equity & Quant Strategy

### 4. AVOID using Structured Notes/Products (financially engineered products)

Structured Products (SPs) are securities issued by financial institutions whose returns are based on, among others, equity indices, a basket of equities, interest rates, commodities, and/or currencies. Thus, the return is “linked” to the performance of a reference asset or index.

They are cunningly marketed in what seem like very attractive packages to retail investors, who in turn gobble them up in the billions of dollars every year. Most SPs include “high and hidden” fees, which make their pricing unfair for the at-issue investor. They are a perfect way for issuers to both borrow at 0% AND collect fees from investors. In most cases, outsized fees - all paid by the investor - are to the benefit of the “supply chain”, which includes the issuing bank, (potentially) a wholesale distributor and/or the Financial Advisor who markets them.

It is not a coincidence that SPs are mainly sold to retail investors who do not have the know-how and are misled by the good marketing skills of the industry. Institutional investors are aware of the above “traps” and tend to avoid such products.

Many regulators (including the US SEC and UK FCA), as well as multiple articles in the financial press have raised concerns about individual investors not understanding SPs.

### 5. If they look too-good-to-be-true, they are

Litigation, caravan-parks, trade-finance, student accommodation, wine, timber/forestry, unlisted property, second mortgages, asset-backed bonds and many more “exotic” funds that offer steady and high returns each month should be avoided. They have slick marketing but in most cases they are not at all transparent and anything but safe. They are offered only to retail investors. They target returns in the upper single digits or more and expect to do so with “low and uncorrelated” risk. It begs the question when risk-free bonds yield between -0.9% (CHF) to +1.6% (USD) annually for 5 years, how any financial product can produce such high returns without the commensurate risk? If the idea is so sound, why do the fund

managers require retail investors for funding at such high borrowing costs? One would think they could present a solid business plan to their bankers and secure a loan at prevailing interest rates of 1-3% and reap huge profits for themselves. Avoid.

In the next article we shall cover the “do’s”...



## Big tech must prove itself

Contributed by IMCZ member, Christian Wagner

### Introduction

The increasing digitization of the world has produced a handful of global companies that are becoming increasingly important both to the world economy and to the financial markets. As with industrialization in the 19th and mobility in the 20th century, some companies have developed a position of supremacy that needs to be examined. After years of *laissez-faire*, they are now being scrutinized by state regulators and need to explain themselves. The fact that the five tech giants - Microsoft, Amazon, Apple, Alphabet (Google parent company) and Facebook - have only one thing in common does not make things easier. The common factor, which has also led to the term "big data", is their ownership of IT platforms and their use of data derived from them which is being appraised critically.

### Content responsibility

From the beginning, the question of responsibility for postings on the Internet was an issue. The tech giant that worries most is Facebook, which at first understood itself only as a provider of content. It never understood itself to be a part of the more-or-less supervised media. Meanwhile, the term "social media" has become established, and it is the British government that will soon establish an independent regulatory agency. Their mission is to monitor malicious content on platforms such as Facebook and YouTube, and billion-dollar fines, criminal sanctions and even site bans are possible.

### Taxes

The assumption that businesses are favoured in a capitalist economic system is not new. Already the international orientation of large

### Protection from competition

Takeovers and mergers are common in all industries, but since 2010 the Big 5 have spent USD 100 bn in cash (and more in equities) on the takeover of potential rivals, one reason why the number of software and hardware companies with more than \$1 Billion market capitalization since 2000 is unchanged. The EU was the first to act, banning Google from listing their preferred shopping in its search results. On July 24, the American FTC (Federal Trade Commission) also unexpectedly initiated a Facebook investigation. Almost at the same time, the DoJ (Department of Justice) started investigations against online platforms (antitrust regulation). Amazon and Apple are also under surveillance; the former because data from retail sales are misused for advertising its own products, the latter because they use their Apps to promote Apple Music.

### Conclusions

The big tech companies have long benefited from the increasing digitization of the world and from the lack of social and regulatory policies. This is changing rapidly, and negative consequences for these tech giants are to be expected. Since Microsoft, Amazon, Apple, Alphabet and Facebook account for around 50% of the capitalization of the US IT sector, there is also a risk of an overweighting that needs to be taken seriously.



### Misuse of data

The case of "Cambridge Analytica", where data provided by individuals for supposed statistical analysis was subsequently transferred to others without their knowledge, is only the best-known example of data abuse. The EU's recently adopted General Data Protection Regulation (GDPR) is a first step to regulate data collection. GDPR requires that the customer have access to his data, is able to modify it and can also determine to whom it is provided. Although this regulation applies only to the EU, it has already been adopted by several other countries. It goes without saying that the Big 5 are against it, and since they are all North American companies, the US will probably need a longer time to regulate.

conglomerates makes it possible to exploit tax advantages in individual states. However, the current tax law is geared to physical presence, products or services and not to digital offerings that have no fixed location. It therefore offers many opportunities for businesses not constrained by physical presence to reduce their tax bills. The French government has been the first to respond and is expected to introduce a 3% sales tax in October. The step is basically correct but has the disadvantage that it is automatically classified as protectionist because the companies to be taxed are all American. A second approach is to make it impossible for such companies to domicile in a tax haven.

# ELGIN GROUP LLC

## Portfolio Management Services

The Elgin logo features the word "Elgin" in a serif font, with a red dot above the 'i' and a red underline beneath the letters.

Simplicity boils down to two steps:

- Identify what is essential
- Eliminate the rest

Never truer than in managing money in a world that strives to complicate matters when the facts are quite simple, and actually undisputed:

- We live in a very low/negative interest rate environment
- Past performance is no guide to the future

We at Elgin believe the answers to successful investing are also quite simple and that your portfolio should:

- Reflect Asset Allocation that matches your risk profile
- Hold quality, transparent & liquid securities

Just a couple of extra points to consider:

- Ensure you choose a custodian that is financially stable in a reputable jurisdiction
- Keep fees to a minimum

Getting started:

Drop us a line to arrange a no-obligation, no fee consultation to assess your:

- Risk profile
- Likes & dislikes

We will provide you with some suggestions to consider. If you wish to proceed we will:

- Arrange a custodian account for you
- Take care of regulatory procedures

You can:

- Transfer funds to your new account
- Relax and leave the rest to us

If you have:

- 15K to 15M USD/EUR/GBP/CHF to invest
- And a desire to simplify your investments

Contact us via:

[info@elgingroup.com](mailto:info@elgingroup.com) or Alasdair Burnie  
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[www.elgingroup.com](http://www.elgingroup.com)

Elgin. Keeping it simple

Elgin is a privately owned, Swiss regulated, investment management firm offering a broad range of highly personalised services.

Independence, due-diligence and a single-minded approach to wealth preservation and appreciation is central to the Elgin philosophy. We provide one-on-one advice to help investors achieve their financial goals and choose the right investment approach to match their individual needs, investing style and attitude to risk.

We also offer to independently assess any existing investments, make suggestions and offer either an actively managed well-diversified portfolio or simply offer you assistance so that you can be in control of your own destiny. Either way, Elgin offers a seamless facility to move between services to suit changing circumstances.

## Worms

A biology teacher wanted to impress the dangers of alcohol upon his young students, so he had them perform an experiment. The students placed worms in vessels containing mineral water, whisky, beer and wine, and left them there overnight. The next day, the worms in the whisky, beer and wine glasses were all dead, but those in the mineral water were still alive.

“So”, asked the teacher, “what do you conclude from this experiment?”

A little girl at the back of the class raised her hand.

“Yes?” asked the teacher.

“It’s obvious,” she said, “if you drink plenty of beer, wine and whisky, then you won’t have worms!”



## Checking Out

Hospital regulations require a wheelchair for patients being discharged. However, while working as a student nurse, I found one elderly gentleman already dressed and sitting on the bed with a suitcase at his feet, who insisted he didn’t need my help to leave the hospital.



After a chat about rules being rules, he reluctantly let me wheel him to the elevator.

On the way down, I asked him if his wife was meeting him.

“I don’t know,” he said. “She’s still upstairs in the bathroom changing out of her hospital gown.”

## Exam Answers – Part 2

A continuation from the last Newsletter edition. More apocryphal stories from the classroom.



### Sociology

**What guarantees may a mortgage company insist on?**

If you are buying a house, they will insist you are well endowed.

**In a democratic society, how important are elections?**

Very important. Sex can only happen when a male gets an election.

**What is a social node?**

A friend you have known for a very long time.

### Medical

**What is the first thing you would do to someone who has been immobilised in a road accident?**

Rape them tight in a blanket and give them a sweet cup of tea.

**What is artificial respiration commonly known as?**

The kiss of death.

**What should you do with someone you have found unconscious in the water?**

1. Lay them on their backs and give them artificial insemination.
2. Climb on top of the person and move up and down to make artificial perspiration.

**How can you help someone who has fainted?**

1. Rub the person’s chest or, if it’s a lady, rub her arm above the hand instead.
2. Put its head between the knees of the nearest doctor.

**What are steroids?**

Things for keeping carpets still on the stairs.

**What is a common treatment for a bad nosebleed?**

1. Circumcision.
2. Put the nose much lower than the body until the heart stops.

**How would you treat a head cold?**

Use an agonised to spray the nose until it drops into your throat.

**What should be done if someone has been bitten by a dog?**

Put the dog away for several days. If he has not recovered, then kill it.

**What has to be established before giving a blood transfusion?**

If the blood is affirmative or negative.

**How should you remove dust from the eye?**

Pull the eye down over the nose.

**What is an enema?**

Someone who is not your friend.

## Psychology

**What is a morbid state?**

A stage in a take-over, when a bigger offer is made.

## Botany

**What can be coloured red, pink, orange or flamingo?**

The rectum.

**Give an example of a fungus. What is a characteristic feature?**

Mushrooms. They always grow in damp places and so they look like umbrellas.

**What is rhubarb?**

A kind of celery gone bloodshot.

**Describe how flowers are most commonly fertilised.**

1. The pistol of a flower is its only protection against insects.
2. Germination is the process of becoming a German.
3. Fertilisation is the fussing of the male with the female garments.

## Chemistry

**What is a supersaturated solution?**

A super-saturated solution is one that holds more than it can hold.

## Physics

**What is momentum?**

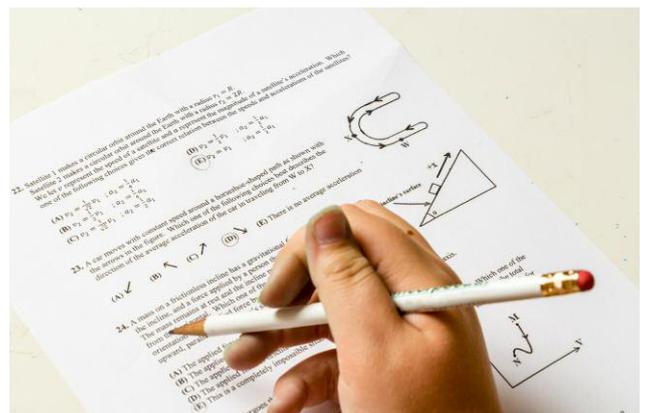
What you give a body when they are going away.

**What is a vacuum?**

A large empty space where the pope lives.

**What is a magnet?**

Something you find crawling on a dead cat.





## Members' Marketplace

Are you **selling** your yacht (harboured in Piraeus)?  
 Your Aston-Martin old-timer with the roll top roof?  
 A gorgeous view of the Bay of Biscay,  
 with a little bit of house attached?  
 Or are you cashing in the half of your stamp  
 collection that is finally worth something?  
 Perhaps you're **looking** for all of these things?

### Then ADVERTISE here, in the IMCZ News;

The Members' Marketplace is reserved for unformatted advertisements of 150 characters (approx. 3 lines) of text.

These are free of charge to IMCZ members.

Advertisements must be submitted as illustrated below.  
 Longer advertisements cost CHF 30.-

**Example:** FOR SALE: gorgeous view of  
 Bay of Biscay with stunning sunsets and high waves.  
 Wee house (12 rooms), dock and yacht included.  
 Call Bill at 041 123 45 67.

your text here.

## IMCZNEWS Advertising Rates

The IMCZ newsletter is delivered bi-monthly to about 200 members representing 20 nationalities. IMCZ members have personal or professional interests in both the international community and in the canton of Zug.

**Format:** A4 vertical, full color.

**Ad content delivery:**  
 electronic by e-mail, .pdf, .jpg, .gif

### Advertising Rates:

- Full page, A4 vertical (19 x 27.7 cm), Fr. 200.-
- 1/2 Page, A5 horizontal (19 x 13.5 cm), Fr. 110.-
- 1/3 Page, vertical (6.3 x 27.7 cm), Fr. 85.-
- 1/3 Page, horizontal (19 x 9.2 cm), Fr. 85.-
- 1/4 Page, A6 vertical (9.2 x 13.5 cm), Fr. 60.-
- 1/4 Page, horizontal (19 x 6.9 cm), Fr. 60.-
- Business Card (9.2 x 6.45 cm) Fr. 45.-

Extra costs may be incurred for typesetting, special formatting, etc.  
 IMCZ Members receive a 20% discount on advertisement costs.

A series of 6 successive ads in the newsletter (a year's subscription) can be purchased for the price of 5. (see <http://groupspace.com/IMCZ/pages/advertising>).




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