

The logo for AirPlus International, featuring the brand name in a white serif font on a dark blue rectangular background.

AirPlus

The word 'INTERNATIONAL' in a white sans-serif font, positioned below the main brand name on a dark blue background.

INTERNATIONAL

A woman with dark curly hair, wearing a white blazer and trousers, is walking through an airport terminal. She has a large tan shoulder bag and is pulling a black rolling suitcase. The background shows the terminal's interior with lights and other people in the distance.

AirPlus Traveller Productivity.
How to tailor your travel policy to
improve traveller performance.

AIRPLUS. WHAT TRAVEL PAYMENT IS ALL ABOUT.

Travel managers play a crucial role in producing travel policies that are devised to ensure that travellers are not just comfortable and healthy, but equally able to perform at their best when working abroad.

Index

Introduction

- 4 Business travel and staff performance

Executive summary

- 6 Background
- 6 AirPlus travellers analysed
- 6 Heart monitors recorded the load travel placed on the body
- 6 Travellers and non-travellers displayed significantly different results
- 6 Intrinsic and extrinsic factors

The view from AirPlus International

- 8 Travel policies need to be continually reviewed to ensure they are in line with both corporate and traveller needs

The view from Optima-Life

- 10 Business travel is essential but so is the well-being of staff

The view from the Business Travel Market

- 11 Some business travellers are better suited to cope with the rigours of travel than others.

The study

- 12 The results displayed
- 14 The results explained

The findings

- 15 Five things to consider for your organisation's business travel policy
- 16 Advice for staff that travel on business
- 16 Things to keep in mind

18 Conclusion

Introduction.

Is your organisation's corporate travel policy designed to get the most out of your staff when they arrive at their destination?

As many frequent business travellers and their travel managers know only too well, it is stress which now seems to be fast replacing what was once thought of as the glamour of foreign travel.

Business travel and staff performance

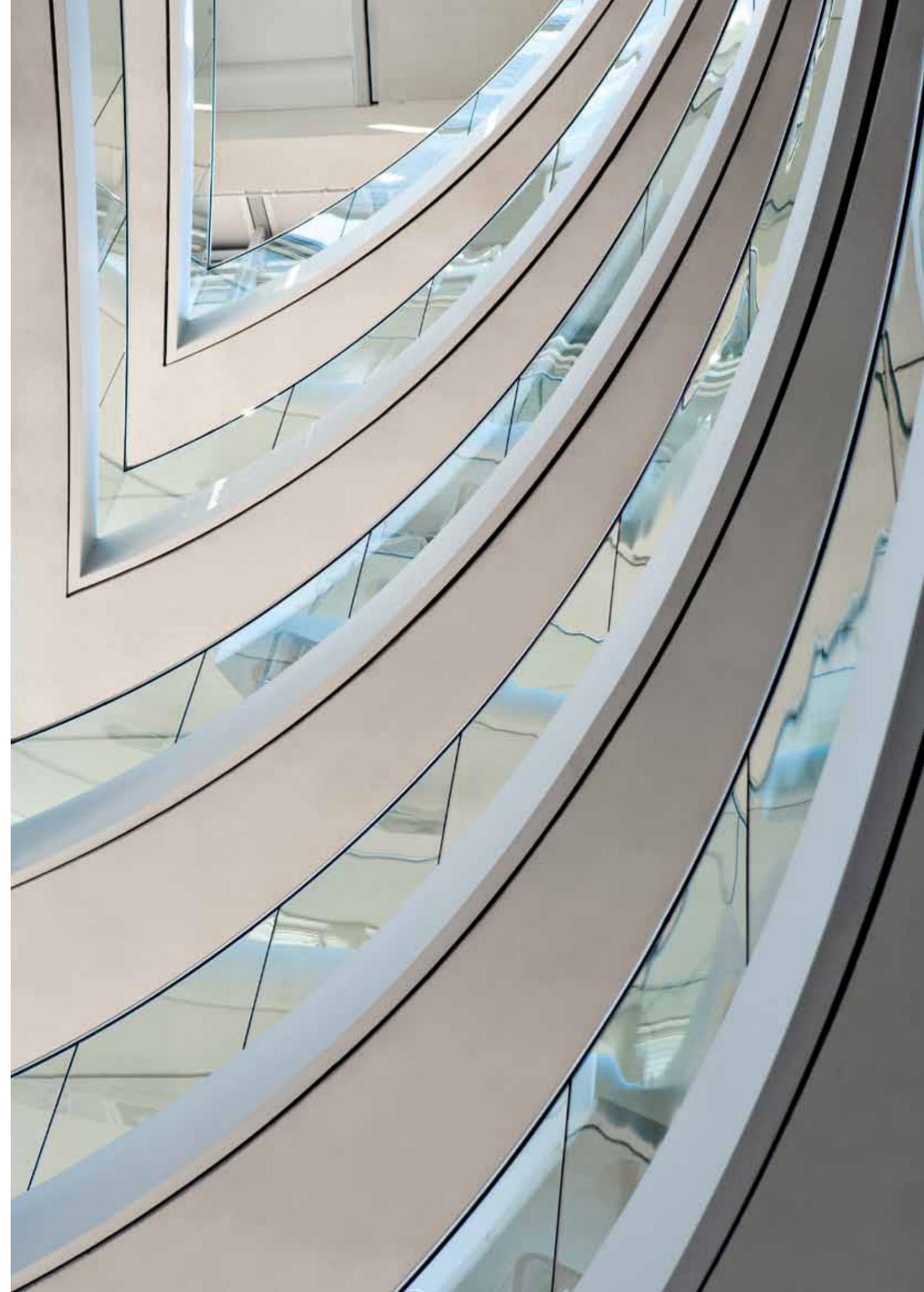
There is little that's appealing about the bit before you board the plane – standing in a long queue at one of the world's major airports, waiting to go through security screening, where you will probably be asked to unpack your bag and remove your jacket, your belt and your shoes as you clutch a little see-through plastic bag containing any liquids you may have with you.

As security rules remain tight in the wake of the threat of both real and imaginary terrorist attacks, flying on even the shortest business trip can now be far from pleasurable.

Stress now seems to be a fact of life with only the operators of the airside airport retail outlets coming out as the real winners. By the time most frequent flyers have cleared security check points and made it to the departure area the major priority is not planning tomorrow's business meeting but making a beeline for the airline lounges, usually accessible only to passengers flying in first or business class, or at least grabbing a coffee and finding a comfortable seat close to the departure gate.

Travellers handle early starts, delays, uncomfortable seating, dehydration and not eating adequately; all the while lugging their heavily packed carry-on case so that they can speed through security at their destination. All this can mean that they arrive at their destination tired, disgruntled and perhaps not as prepared for their meeting as they would have liked.

So, what effect, if any, will this have on that ever important outcome of the meeting which they have crossed oceans to attend?



Executive summary.

So, how much stress is actually involved in business travel?

Background

The challenge of working out how much stress is involved in business travel and finding ways to alleviate it prompted AirPlus International – global corporate payment provider, to team up with OptimaLife – leading physiological research company, in a high-tech study aimed at providing some answers.

AirPlus travellers analysed

Employees at AirPlus International agreed to take part in the study which looked at the effect of travelling on the body, indicated by recovery levels. Each of the employees, who were split into two groups, a travel group and a non-travel group (control), wore a sophisticated heart rate monitor called Bodyguard™, a device which measures both heart rate and heart rate variability – two key variables used to understand the stress the body is under at any given time.

Heart monitors recorded the 'load' travel places on the body

Participants wore the monitor continuously for three days and three nights, and their average recovery for the three-day period was calculated. Monitors were worn continuously day and night, and were only removed during bathing/showering. Monitors were even worn during flights and other travel.

The non-travel group continued with all their daily activities as normal, and remained in the UK, while activities for those in the travel group included short trips to other European countries and more lengthy travel to destinations in the USA and Singapore.

Travellers and non-travellers displayed significantly different results

The results from the two groups, which were very different, showed a significant reduction in recovery levels in the travelling group compared to the non-travelling group. The average daily recovery

percentage in the non-travelling group was 26% compared to only 14% in the travelling group. The average time used for sleeping was also significantly reduced in the travelling group with an average of 6 hours 41 minutes compared to 7 hours 2 minutes in the non-travelling group.

The results not only showed the percentage or duration of recovery, but also showed the quality of recovery which is represented in the resource balance score. The travelling group achieved an average resource balance of negative 35 compared to a resource balance score of positive 81 in the non-travelling group. This resource balance is scored on a scale of -100 to +100.

Poor recovery can occur as a result of several intrinsic and extrinsic environmental factors. Some of these can be controlled to a certain extent; however, some are unavoidable and are outside of our control.

Intrinsic environmental factors include:

- > Dehydration
- > Alcohol consumption
- > Anxiety or stress (fear of flying or work-related stress – preparing for meetings on arrival)
- > Nutrition
- > Physical activity
- > Medications (including sleeping tablets)

Extrinsic factors include:

- > Sleep environment (trying to sleep on the plane, hotel environment), such as:
 - > Noise
 - > Altitude
 - > Lighting
 - > Temperature
- > Body comfort (pillow, bed, sleeping position and clothing)
- > Time zone changes
- > Flight times



The view from AirPlus International.

Travel policies need to be continually reviewed to ensure they are in line with both corporate and traveller needs.



As a major operator in the corporate travel market AirPlus is obviously in a very good position to judge major issues in business travel but what prompted the company to get involved in this research?

The company's Managing Director, Yael Klein, explains: "At AirPlus we work consultatively with our clients to help them to optimise their expense payment and management processes. We make recommendations on how our customers can reduce costs but also advise on other areas of their travel management programme of which traveller productivity is a significant part. We understand that productive staff are essential to any performing business and so ensure we consider this when talking to customers about how to tailor their travel programme to suit their specific needs."

So, what of the question why some companies are allowing their employees to travel under conditions which are less than ideal?

"I don't think that it is a case of employees travelling under less than ideal conditions but rather the fact that some businesses are not aware of the difference different methods of travelling can make to an employee's productivity. For example, a staff member

who consumes alcohol the night before a big day, although they may feel fine, their productivity the following day will be compromised," says Yael Klein. "In the same way, although it may be more cost-effective for a staff member to travel very early in the morning to make a 9am meeting, it might be more conducive for them to travel the evening before and stay the night in a hotel, as it may enable them to perform better on the day of their meeting."

And what is her view of whether or not corporate decisions on travel policy should be made only on cost? If so, should this change?

"Corporate decisions are not only made based on cost; however, a lot of decisions are. Should it change? Well this is dependent on the specifics of the meeting and the appropriate travel booking needs to be made taking a variety of factors into consideration" she says. "If the meeting involves a lot of key strategic decisions, an employer would want their attendees to be well rested to make good decisions."

So, what advice would she offer to corporate organisations when setting their new business travel policies?

"Generally I would advise that corporations take all areas into consideration when deriving their travel policies and choose the appropriate travel booking so as to meet the objectives of that trip. I would not recommend first-class or business-class travel across the board, but instead would suggest that the purpose of the trip/meeting be considered and the appropriate means of travel chosen," says Yael Klein. "It is important to remember that the last few years have been challenging times for most organisations and the recession and unstable economy have forced businesses to tighten travel policies and cut back where they can. At some point this must be reviewed because healthy and happy staff improve the performance of any business and so policies need to

be continually reviewed and updated to ensure staff remain satisfied."

And what changes will AirPlus make to its own travel policy and travel habits in the light of this research?

"As experts in business travel management, we already try to take such things into consideration within our own travel policies as we would like to consider our own travel management as an industry benchmark," Yael Klein says. "Nevertheless, following the tightening of policies during the recession, it is important that we review our policy, and continue to

do so on a regular basis to ensure that our policy is relevant, and our travellers are satisfied."

But bearing in mind that many world economies are still in pretty poor shape does she think employees' well-being when they travel on business should be a higher priority?

"Only a healthy employee will be able to contribute to the business' success. Although economies will drive organisations to make decisions based on cost, we suggest that businesses look at the well-being of their employees too," is Yael Klein's view.



The view from Optima-Life.

Business travel is essential but so is the well-being of staff.

Business travel is essential for international business communications and networking, but so is the well-being of staff, according to Simon Shepard, Chief Executive of Optima-Life, the organisation which conducted the research. "Travel for business is, of course, both essential and necessary. It is therefore critical that business travellers are able to optimise their recovery levels to ensure that they are able to perform at their peak," he says.

The tests he and his colleagues conducted, while perhaps not scientifically conclusive, show "very little recovery" amongst people unable to get enough good-quality sleep when travelling compared with those who continued working at their normal office bases.

The main factors combining to prevent business travellers getting enough good-quality sleep, particularly on long-haul flights, include poor aircraft lighting, dehydration and the inability to lie flat when sleeping, he says. Though if corporate globetrotters are travelling in some airlines' business-class or first-class cabins it is often possible to stretch out on seats which convert into fully flat beds.

It is important, he says, that business travellers take steps to help recovery after they land at their destination. This may include re-hydration, getting some proper sleep and exercise.

The view from the Business Travel Market.

Some business travellers are better suited to cope with the rigours of travel than others.

Paul Robin, Event Manager of the Business Travel Market, worked in collaboration with AirPlus International to produce this study. He suggested that there are comparisons to be made between corporate travellers and top athletes. "I have always been interested in the parallels between sport and business and believe each can learn lessons from the other," he says. "It is clear to me that there is much those involved in business travel management for their organisations can learn from sport in terms of optimising performance."

"From this initial study and from what I understand from Optima-Life's wider work, everyone's physiology is unique. Therefore it follows that some business

travellers will be better suited to cope with the rigours of regular travelling. Some will recover faster than others."

It may be that some companies whose employees travel on business regularly would consider more carefully who is best to send on trips, once they have access to the information we provide here, he suggests.

"In other words, who is most likely to be the best for the task in hand in the given time frame? It is a very interesting area and one which may ultimately benefit businesses," he says.

"First-class or business-class travel is probably not best used across the board but instead it should be used tactically depending on the purpose of the trip."



The study.

Long-haul, short-haul, time zones and business travel classes compared.

The study, conducted on behalf of AirPlus International, compared changes in heart rate variability responses between two groups over a 72-hour period and used this physiological marker as an indicator of times when the body is under load (stressed) and times of rest and recovery.

Group 1

Group 1 consisted of people who were undertaking air travel during the 72-hour period. The flights included:

London – Germany
Paris – Germany
Singapore – Shanghai
London – Sydney
London – US
Germany – Singapore
Germany – Dubai

Group 2: control

Group 2 consisted of people who were not undertaking air travel but who were still completing a typical working day based in London.

How it works

Each participant wore a monitoring device called a Bodyguard™ which is designed to take detailed measurements of heart rate and heart rate variability.



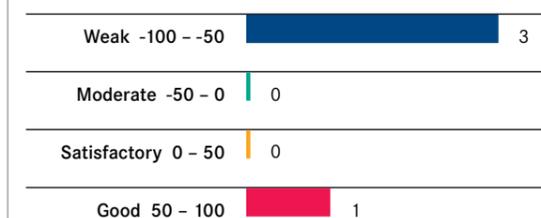
The Bodyguard™ is attached to the chest wall via two standard ECG electrodes. With a measurement sensitivity of 1,000 Hz it allows for highly accurate detection of heart rate and, more importantly, variations in heart rate variability (HRV). HRV shows the changes in the pattern of heartbeat; it is measured in milliseconds and is the time between consecutive heartbeats. HRV is a product of the autonomic nervous system (ANS), a group of peripheral nerves that control many subconscious body actions such as respiration, digestion, heart rate, perspiration and salivation. The ANS is divided into two subsystems: the parasympathetic and sympathetic systems with the former being associated with times of rest and recovery and the latter being associated with stimulation, excitement (in extreme times the phrase ‘fear, fight and flight’ is often used). Sympathetic activity correlates with secretion of adrenaline and cortisol, which are often referred to as stress hormones. Analysis of HRV allows understanding of how an individual is dealing with the loads placed upon them and shows whether an individual is in a sympathetic or parasympathetic dominant state.

Data was collected over a 72-hour period (day and night) and only removed when the participant was showering/bathing. Analysis was then performed using Firstbeat Health, a software engine based on extensive research on physiology. It analyses raw data and provides a digital model of key measures of human physiological function.

Group A: Travellers Sleep.

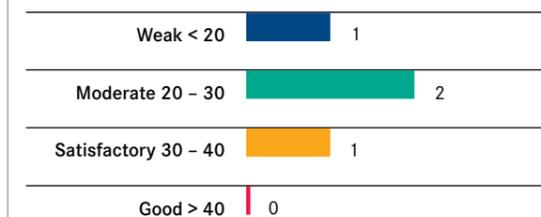
Resource balance

-35



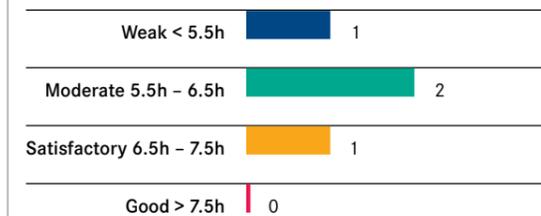
Quality of sleep

24 hours



Time used for sleeping

6h 41min



The resource balance shows the division of stress and recovery during the sleep time.

The quality of sleep is determined from a heart rate variability based index (RMSSD). High values are associated with increased activation of the parasympathetic nervous system and good recovery. Low values indicate some kind of unfavourable changes associated with automatic regulation.

Group B: Non-Travellers Sleep.

Resource balance

-81



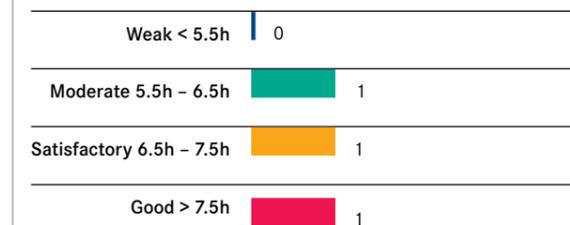
Quality of sleep

68



Time used for sleeping

7h 2min



The RMSSD value is also affected by sex, age and fitness level.

The average value during sleep is 45 for men and 39 for women. (Source: Firstbeat user database 2009)

The need for sleep can vary significantly between individuals. The time used for sleeping has been derived from the person's diaries.

The results explained.

Travellers v. non-travellers

	Travellers	Non-travellers
Stress %	69 (56 to 95)	58 (49 to 66)
Recovery %	14 (0 to 27)	28 (20 to 32)
Resource Balance	-65 (-100 to -36)	-36 (-54 to -21)

Non-travellers clearly experienced more recovery than the travelling group. The travelling group were more heavily loaded and experienced higher levels of stress than the non-travelling group.

Long-haul v. short-haul

	Short-haul	Long-haul
Stress %	57 (56 to 58)	83 (67 to 95)
Recovery %	15 (23 to 27)	3 (0 to 5)
Resource Balance	-38 (-42 to -36)	-93 (-100 to -89)

When comparing short-haul and long-haul travellers, although all travellers were heavily loaded, the long-haul travellers were far more loaded than the short-haul. Long-haul travel places far more strain on the body than short-haul travel.

Long-haul with/without time zone change

	Long-haul +1 hour	Long-haul +9 hours
Stress %	65	86
Recovery %	16	5
Resource Balance	-15	-65

It is also interesting to look at the difference that moving into different time zones can have on the body, producing a more heavily loaded state as sleep patterns and natural bodily rhythms are disturbed.

The results explained

The results showed a significant reduction in recovery time in the travelling group as compared to the non-travelling group. The average recovery period over a 72-hour period in the non-travelling group was 26% compared to 14% in the travelling group. The average time used for sleeping was reduced in the travelling group with an average of 6 hours 41 minutes compared to 7 hours 2 minutes in the non-travelling group.

In addition to the time spent in recovery (parasympathetic dominant state) and time spent loaded/stressed (sympathetic dominant state) we are able to draw some opinion on the intensity of these two reactions. Furthermore, by looking at both time and intensity of reaction we can produce a score that reflects the balance between the two states. A scale that runs between -100 and +100 has been formulated. A score of -98 would indicate a 72-hour period where sympathetic status has been very dominant whereas a score of +98 would show a 72-hour period where parasympathetic status has been highly dominant. This is called the 'balance of resources'.

The comparison shows a significant difference between the two groups in terms of balance of resources despite similar times spent sleeping.

The heavily loaded state can result in fatigue which, in turn, can negatively impact business performance through:

- > A reduction of mental capacity
- > Diminished communication skills
- > Lower levels of concentration
- > Decreased engagement
- > Reduced levels of tolerance
- > Increased risk of ill health

The findings.

Practical steps to improve your corporate travel policy.

The physical, mental and environmental demands travel places on the individual have often been thought of as considerable. The differences seen between the two groups would suggest that this assumption is correct.

Travel has to happen as do business meetings, but for the traveller who wants to perform at their best on a regular basis he/she needs to be physically, mentally and emotionally resilient. Whilst it is inevitable that people will have days where the balance of resources are highly negative, if this status becomes typical over a period of time it is likely that the resultant fatigue will lead to an increased chance of diminished mental capacity, poor communication skills, burnout and ill health.

Five things to consider for your organisation's business travel policy

So, how can you make improvements to your travel policy in order to have more productive staff?

1. Bear in mind that the cheapest option, such as travelling in economy on a flight leaving or arriving at an unsociable hour, may not be the best option if a staff member arrives in an unfit state to do business.
2. Consider whether it may be better to pay for business class or allow your staff member to stay the night in a hotel before getting down to business.
3. Allow business travellers to use taxis to and from airports, rather than have to put up with the stress of using cheap public transport.
4. Choose to use hotels which allow business travellers to check in to their rooms early if necessary and/or check out late before a late-night flight.
5. Provide regular advice to travellers to ensure that they know what they need to do when they travel to stay at their best: hydration, healthy eating, getting enough sleep and taking regular exercise.

As Yael Klein says, "The best advice would be for corporations to take all areas into consideration when setting their travel policies and choose the appropriate travel booking so as to meet the objectives of that trip. First-class or business-class travel is probably not best used across the board but instead it should be used tactically depending on the purpose of the trip."



Advice for staff that travel on business.

For travelling staff members themselves, there are a number of strategies/factors they should be made aware of that will help reduce the physiological demands on the body. These include:

> Hydrate:

Make sure you are hydrated before, during and after a flight.

> Exercise during your flight:

Exercise during your flight wherever possible. This means walking up and down an aisle and not just sitting in your seat wiggling your ankles and toes.

> Exercise pre-/post-flight:

Exercising when you have arrived at your final destination (hotel or home) will help and obviously the fitter you are the more resilient you will be to the physical demands of travel.

> Get organised:

The more you are prepared for your travels the more you will enjoy your flight. Worrying about meetings, tickets, hotel reservations, facilities, etc. will only increase stress.

> Control your environment:

Light and sound stimulate areas of the brain that are not associated with optimising recovery so if you are trying to sleep on a flight look at the benefits of blindfolds and noise-reduction earphones. You can turn your entertainment terminal off and use pillows to support your neck and blankets to keep you warm.

> Nutrition:

Eating a heavy meal just before you sleep will not help your recovery; equally sleeping whilst hungry is also not productive. So, if you are taking an overnight flight with little change in time zone there is much sense in trying to have your evening meal before you get on the flight.

> Avoid alcohol:

Alcohol causes dehydration and stimulates the sympathetic nervous system. It may help you get to sleep but it is unlikely to help the quality of recovery.

> Think about timing:

Matching the time of your flights to your natural body clock may be of benefit.

> Medication:

There will be a number of remedies on the market: some are only available with prescription and some are available over the counter; some are pharmaceutical and some use “natural” ingredients. The basic advice is that if you are considering any form of medication consult your doctor.

Things to keep in mind

Travelling in first class or business class provides corporate travellers with more legroom than that endured by those towards the back of the plane in the economy seats. You certainly get more attentive service and probably better food and drinks, but this doesn't change the fact that you'll be sitting still, possibly for hours on end, and that is not a good thing to do. Much better to risk looking a bit stupid and take some in-flight exercise.

The debate whether or not ailments such as deep vein thrombosis (DVT) are caused by travelling by air continues, with many experts arguing that the often life-threatening condition is a result of any kind of inactivity, whether this is on a plane, during a long car journey or virtually anywhere else.

You should be careful what you eat and drink when you fly, of course. Some spoilsports may even suggest you go without an alcoholic drink altogether but a better plan is probably just to be reasonable. Remember that alcohol does tend to dehydrate you, particularly when you fly, and it's important to drink plenty of other, non-alcoholic, liquids, too.

If you are hit with jetlag it makes sense to try to avoid scheduling important meetings at your destination when the local time in your home country is, say, three or four in the morning, when you are not likely



to be at your best. If, for example, you travel from London to Hong Kong, which is eight hours ahead of the UK, you will hit your maximum sleepiness between the hours of 11am and 1pm Hong Kong time. If you plan a business meeting around this time it is the equivalent of planning a meeting between 3am and 5am in the UK.

There is an equation you can use to work out when you are most at risk of slipping into the “avoid meetings” zone. Start with the time you usually wake up at home, say 7am. Deduct three hours and add or deduct the local time difference. This gives you the time of your mental and physical trough. You can then avoid making any important decisions around this time.

Conclusion.

Travel managers need to be aware of the effects and stresses of travel on the performance of their travellers. The pure cost of a ticket should, of course, be an important element to consider when devising travel policy. However, it is equally important to consider the demands placed upon a traveller; if these demands are excessive fatigue will become a factor. In turn fatigue can negatively impact business performance through:

- > A reduction of mental capacity
- > Diminished communication skills
- > Lower levels of concentration
- > Decreased engagement
- > Reduced levels of tolerance
- > Increased risk of ill health

Travel managers have a key role to play in producing travel policies that are intelligently devised in order to ensure that travellers are not just comfortable and healthy but equally are able to perform at their best when they are working abroad.

In turn travellers need to be aware of the demands of travel and how, through taking on board positive health and performance behaviours, they can play a proactive role in giving themselves the best possible chance to be resilient, healthy and perform at the top of their game.

Travel for business is both essential and necessary. However, the demands, and the ability to cope with them, will be different from person to person; taking appropriate steps to optimise physiological status will help travellers stay healthy and, for the business traveller, give the essential benefit of increasing the chances of achieving performance and corporate goals.



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