**Travel related illnesses I.**

The pathogen factor the trip itself („real” travel illnesses)

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**TRAVEL RELATED MEDICAL PROBLEMS**

**Before trip:** preexisting (chronic) diseases, acute illnesses

**During the trip:** travel-related medical problems

**After returning home:** emerged infections, travel, convalescence of medical problem during trip

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**TRAVEL RELATED ILLNESS:**

I. The pathogen factor is the trip itself („real” travel illnesses)

II. On-scene hazards: the pathogen factor is the exposure at destination

III. The trip is triggering factor to the medical problem (eg. traffic accident)

IV. The preexisting disease is deteriorated or exacerbates by the trip

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**The motion sickness**

“Some of you will get seasick,” - the captain admitted, - “But as you’re hanging over the rail, remember that you’re providing entertainment for the rest of us.”

* ISTM Professional education and Training committee: Introduction to Travel Medicine (oktatási power-point prezentációs segédanyag), 2. kiadás, 2008
**PREVENTION:**
- appropriate body position
- fresh air
- bellyful stomach (!)
- refraining of alcohol
- antivertiginose drugs

**The jet-lag**

2 hours of flying = 1 time zone

**Light** - inhibits
**Darkness** - facilitates

**Food, cortison, body temperature modifies**

**Melatonin secretio**
Prevention of jet-lag
- artificial night environment in cabin
- argon-diet
- melatonin preparations
- appropriate hydration
- appropriate acclimatisation time at destination

TRDVT – travel-related deep vein thrombosis
swollen leg discoloured skin

The problem was exploded
In September, 2000, Emma Christofferensen, 28 years old fitness champion, died at Heathrow international airport after 20 hours flying. The cause of the death was pulmonary embolism.

Although the pathomechanism, dangers and consequences of the long haul flight resulted DVT has been recognised for long time, („economy class syndrome”*) the medias treated the case as a new one and demanded the science to do something. Thus the travel-related medical problems and the travel medicine was highlighted.*

The sharp refraction of vena poplitea gets the circulation slow and it becomes the predilection site for forming of sludge.

TRDTV – travel related deep vein thrombosis
- post travel embolisation, has occured in 2 weeks after travel
- travelers who never have embolisation in their medical history
- in continuous sitting position more than 5 hours or 5000 km.*


Prevention of the travel related deep vein thrombosis

<table>
<thead>
<tr>
<th>RISK</th>
<th>Risk factors, indications</th>
<th>Prevention*</th>
</tr>
</thead>
<tbody>
<tr>
<td>average traveler, low risk</td>
<td>more than 5 hours immobilisation, flying distance more than 5000 km., poor oxygen and humidity environment in the cabin</td>
<td>scheduled drinking, hyperhydration, regular stand-up and moving, foot exercises</td>
</tr>
<tr>
<td>medium risk</td>
<td>as above, plus age over 40, over weighting, varicosity, pregnancy, ongoing substitution therapy, chronic lung- or cardiac problems, contraceptives, exiccosis</td>
<td>elastic/compression sock, trombocoagulation inhibitors (ASA, aspirin) low molecular weight heparin (LMWH) - the last 2 items have to take before and after flight for 2 days</td>
</tr>
<tr>
<td>high risk</td>
<td>as above, plus severe varicosity, DTV in the medical history, previous lung-embolism, existing cancerous disease, thromboophilia, operation in recent past, plaster on the lower extremity, increased disposition to thrombosis</td>
<td>LMWH, full anticoagulation therapy (by the help of coumarinderivatives)</td>
</tr>
</tbody>
</table>

The pathogen factor is the travel itself

- Movement-related illnesses (jet-lag, DVT, motion sickness)

Illnesses resulted by travel-related stress

Travel as a stressogen factor

- Vegetative symptoms (obstipation, diarrhoea, nausea)
- Mental alterations (fobia, anxiety, hyperactivity disorder, behavioural and/or mood disorders, aggression)
- Mental disorders (depression, travel psychosis, culture-shock)

Sources of travel related stress

<table>
<thead>
<tr>
<th>stress source</th>
<th>description of stress</th>
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<tbody>
<tr>
<td>psychological stress</td>
<td>strange environment, requires a continuous conformity and adaptation, timing difficulties</td>
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<tr>
<td>physical stress</td>
<td>uncommonly much walking, ill-prepared body, insufficient quality and amount of sleeping</td>
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<tr>
<td>environmental-related</td>
<td>unusual climate, unusual structure of food, etc.</td>
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<tr>
<td>psychosocial stress</td>
<td>human relations of the travel group, depression of the expatriots, uncontrolled sexual life, culture-shock</td>
</tr>
</tbody>
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Stress factors during travel

- physical strain
- environmental strain
- psychological strain
- psycho-social strain

- travel fatigue
- vegetative symptoms
- mental alterations

psychosocial stress

- fear of flying (24.4% *)
- withdrawal of nicotine, alcohol or drug
- mistrust in the pilot, in cabine-crew
- bothering at the security check
- long cue, frustration

NAKED AIR® - the next step to the airport security

lost in a strange country, don’t speak the language, unfamiliar society, obscure traditions...

too much walking

Psychiatric problems abroad are responsible for 15-20% of the patient repatriation

Thank you for your attention!