How To Sauna

Safely. Effectively.

Dr Ben Lynch, ND

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Why?

Why Sauna?

- Induce hyperthermia
- Increase oxygenation of periphery
- Induce sweating
- Relaxation
- Support detoxifying organs – skin, lungs, liver, kidneys, lymph
- Mobilize solvents and xenobiotics from stored tissues

What comes out?

Clinical Study

Human Elimination of Phthalate Compounds: Blood, Urine, and Sweat (BUS) Study

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Methamphetamine exposure and chronic illness in police officers: significant improvement with sauna-based detoxification therapy

Gerald H Ross[1] and Marie C Sternquist[2]

[Excretion of nitrogen compounds in sweat during a sauna].

[Article in Polish]

Czarnowski D[1], Górski J.

Author information

Abstract

The aim of the study was to determine a loss of nitrogen compounds with sweat in sauna and to estimate their plasma concentration. Sweat was collided during 30 min stay in sauna. Blood was taken before and immediately after the sauna. Concentrations of ammonia, urea, creatinine and uric acid were determined in the both fluids. It has been found, that the concentration of ammonia in sweat exceeds, that in plasma by 77 times. Ammonia plasma concentration following sauna increased by about 60%. Sweat urea concentration exceeded that in plasma by 3.5 times. Plasma urea concentration was significantly reduced after sauna. Sweat creatinine concentration was about two times higher than that in plasma. No uric acid was detected in sweat. Sweating did not affect plasma creatinine and uric acid concentrations. Results indicate that considerable amount of nitrogen is lost with sweat during sauna.

PMID: 1845745 [PubMed - indexed for MEDLINE]

Table 3 Solute contents of sweat compared with published fasting values for plasma [18,23-26]

	Sweat (S)	Plasma (P)
Betaine ($\mu mol \cdot L^{-1}$)	232	34.0
Choline ($\mu mol \cdot L^{-1}$)	2.1	14.5
Lactate ($mmol \cdot L^{-1}$)	20.4	0.7
Glucose ($mmol \cdot L^{-1}$)	0.41	4.9
Sodium ($mmol \cdot L^{-1}$)	49.3	141
Potassium ($mmol \cdot L^{-1}$)	9.7	4.1
Chloride ($mmol \cdot L^{-1}$)	35.3	105
Ammonia ($mmol \cdot L^{-1}$)	5.81	0.07
Urea ($mmol \cdot L^{-1}$)	10.74	5.7

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Gencer Sancar · Michael Brunner

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"In mammals, many metabolic pathways, including glycolysis/gluconeogenesis, fatty acid synthesis/fatty acid oxidation and xenobiotic detoxification, are rhythmically coordinated by the circadian clock."

the circadian machinery on the transcriptional and post-transcriptional level. Mutations of clock genes are often associated with metabolic defects, especially in lipid and glucose metabolism. Accumulating data suggest that the reciprocal coordination of circadian and metabolic pathways is crucial for cellular homeostasis and the health of the organism.

Keywords Circadian clock · Energy metabolism · Metabolic syndrome

cues such as light, temperature and feeding (entrainable). Circadian clocks are cell-autonomous, but systemic cues contribute crucially to the robustness of circadian clocks in animals.

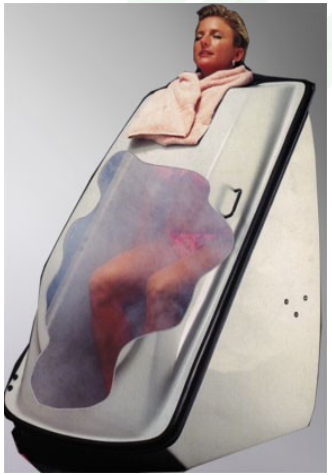
Circadian clocks regulate many metabolic and physiological processes in rhythmic fashion. In cyanobacteria, the circadian clock regulates global gene expression on the level of transcription [1, 2]. The majority of genes are expressed during the light phase when photosynthesis takes place, while oxygen-sensitive reactions, such as nitrogen fixation [3] and purine biosynthesis [4], are confined to the

Sancar, G., & Brunner, M. (n.d.). Circadian clocks and energy metabolism. Cellular and Molecular Life Sciences, 1–14. doi:10.1007/s00018-014-1574-7

Sauna Types

Types of sauna

1. Infrared
2. Wood Heat
3. Wet / Dry - Electric Heater
4. Personal
5. Steam Cabinet
6. Wood Types – poplar, cedar



Sauna Cleaning

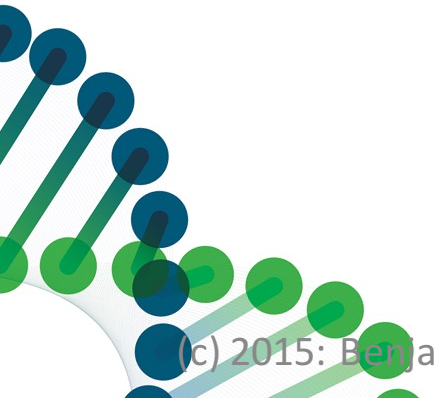
Traditional Sauna

- Don't get it dirty - use clothes and towels
- Leave door open after to allow it to dry

Personal or cabinet sauna?

- Wash with approved cleaners – vinegar, soap/water
- Dry thoroughly
- Leave doors open for airflow
- Wear clothes
- Put old towel on floor and over knees
- Drain water holding tank under seat – basically keep on until no more steam

Can’t Sauna?



Types of sauna

Environmental

Types of sauna

Epsom salt bath

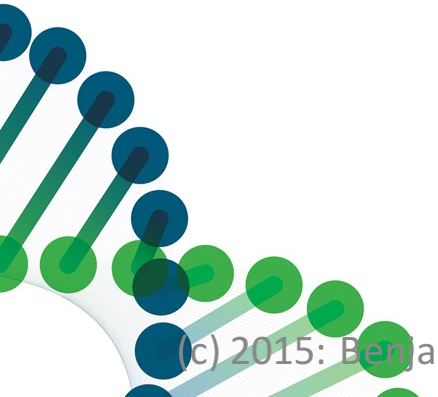
Types of sauna

Peat Bath (Moor Mud)

Types of sauna

Hot Bed

Who?



Who may NOT sauna?

- Pregnant
- Fever
- Drained – ‘I feel weak’
- Dehydrated
- Acute Injury
- Menses

Who may sauna with CAUTION?

- Children
- Medications
- Implants
- Diabetics
- Cardiovascular Disease
- Yang Excess
- Yin Deficiency
- Pitta Imbalance

UNSURE if can sauna?

- Infertile men/women undergoing fertility treatment
- Cancer
- MS
- Case by case basis

Patient Evaluation

Patient Inquiry and Examination

1. Orthostatic hypotension test
2. Blood pressure
3. Urea / Ammonia
4. Creatinine
5. Skin Conditions
6. Implants
7. Pregnancy Test
8. Albumin?
9. Water intake
10. Caffeine intake
11. Cancer, MS, ALS
12. Heat Sensitivities

Preparation

Few Days Before

1. Hydration with electrolytes
2. Adrenal cortex
3. Balanced healthy meals
4. Ensure proper bowel movements – patient must defecate daily
5. Mutivitamin
6. Multimineral
7. Phosphatidylcholine
8. Liposomal glutathione
9. Liposomal vitamin C
10. Restful sleep – 10 PM – no reading in bed
11. Limit strenuous activities – moderate exercise

Day Of

1. Hydration with electrolytes – urine must be clear (vitamin B color ok)
2. Adrenal cortex
3. Multivitamin
4. Multimineral
5. Balanced healthy meals
6. Phosphatidylcholine
7. Liposomal glutathione
8. Liposomal vitamin C
9. No caffeine
10. No exercise

Right Before

1. May sauna 30 minutes after a meal (80% satiety)
2. If no meal, eat snack – complex carb, sugars and bit of protein
3. Heat sauna to desired temperature: 110 F – 145 F
4. Dress in 100% cotton T shirt and shorts
5. Place old towels on bench and floor
6. Filtered water in big glass bottle/jar with electrolytes
7. Urinate / Defecate
8. Niacin – until flushed (inform about side effects)
9. Phosphatidylcholine
10. Liposomal glutathione
11. Liposomal vitamin C
12. Weigh on scale – write down weight
13. Pulse rate
14. Sauna Hat or Towel
15. Note how feeling
16. Journal: date, weight, pulse, BP, s/sx, time, temp, odors

Cautions

Cautions during sauna

1. Not a competition
2. Start low heat - 110
3. Start low duration – 10 minutes (or first sign of ‘off’)
4. Don’t fall asleep
5. Kids don’t regulate temperature well – get hot fast
6. Don’t drink alcohol
7. Drink room temperature filtered water (reduce colic)

Common Issues

Common issues

1. **Can't Sweat:**

- Dehydrated
- Adrenals shot
- Toxicity levels higher

Solutions:

- Hydrate
- Exercise prior to sauna
- Support adrenals
- Low histamine? Eat more histamine containing foods
- Stay committed. Slow progression.

Common issues

1. **EMF:**

- EMF sensitivity

Solutions:

- Wood sauna or hot bath
- Glutathione / NADH (upon waking) for a few days
- Turn off WiFi in home
- No data use on phone
- No dimmers
- Distance away from electronics

Common issues

1. **Passing Out:**

- Patient commonly passes out

Solutions:

- Too hot. Start lower temp – 110 F
- Too long. Don't fight it. Get out.
- Keep light on.
- Keep eyes open.
- Lay down
- Support adrenals
- Support detoxification pathways
- Dehydrated
- Electrolyte / Mineral deficient - replenish

Common issues

1. **Headache:**

- Patient commonly gets headache afterwards

Solutions:

- Too hot. Start lower temp – 110 F
- Too long. Don't fight it. Get out.
- Evaluate BP
- Evaluate breathing during sauna and post
- Support detoxification pathways
- Pathogen die-off?
- Dehydrated
- Bowel movements?
- More protective oils – PC, olive oil, EPA/DHA, krill
- Electrolyte / Mineral deficient - replenish

Common issues

1. **Dirty Public Sauna:**

- Concerned about cleanliness

Solutions:

- Wear clothes
- Wear sandals with socks
- Sit on towel
- If smells ‘musty’ – get out and don’t go back
- If has ‘spots’ – get out and don’t go back
- Read reviews
- Take shower with soap / water immediately afterwards

Sauna

During

1. Leave light on
2. Keep hydrated
3. Sit or lay down (with eyes open)
4. Note how long it takes to start sweating (write it down)
5. Focus on breathing through nose
6. Wear sauna hat or put towel over head
7. Dry skin brushing
8. Take breaks – make an event out of it
9. First sign of ‘fatigue’ or ‘not right’ – get out

Contrast

When strong enough, apply contrast to stimulate perfusion and elimination of waste.

DO NOT DO IF WEAK.

Caution in asthmatics.

- Cold shower
- Cold plunge
- Lake
- Snow
- River
- Canal
- Bucket

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Sauna Contrast Hydrotherapy

Benjamin Lynch

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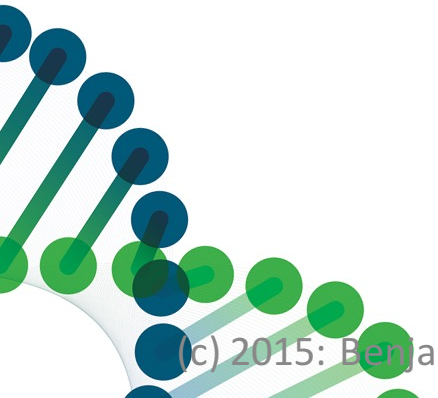
After

1. Weigh
2. Shower with soap and water
3. Remove towels from sauna and leave door open
4. Brush teeth and scrape tongue
5. Update Journal – how feeling
6. Hydrate with electrolytes
7. Bundle up, wear hat
8. Avoid drafts, stay warm
9. No exercise or activity
10. Eat warm and room temperature healthy food – Korean style
11. Go to sleep, read books, watch a movie

Frequency



How often?

1. As long as feeling strong, can do daily
2. Maintenance – once a week

Goals

What to shoot for?

1. Increased duration
2. Increased temperature
3. Increased sweating
4. Increased energy
5. Increased perfusion
6. Decreased xenobiotics
7. Relaxation ☺