# **Clermont Health Center**

# Covasna – a balneotherapy resort of national interest

Placed at an average altitude of 550-600 m, Covasna is located at the point where the Western slope of Vrancea Mountains meets Barsa Depression, 30 km away from Sfantu Gheorghe, 55 km from Brasov and 220 km from Bucharest.

Carbogaseous, bi-carbonated, chlorinated, sodic, ferruginous mineral waters and therapeutic mofette gas are manifestations of post-eruptive volcanic activity. Owing to their therapeutic properties, Covasna is a resort of European interest open all year round, providing therapies mainly focusing on cardiovascular disease. Covasna ranks first in Europe in point of  $CO_2$  mofette concentrations (up to 98%), 24 % - 34 % more than the  $CO_2$  concentration in Grota di Cani in Italy, one of the most renowned resorts Europe-wide. The particular features of the gas mix, the high number of fumaroles, the overall flow rate, their association with mineral waters and the positive therapeutic effects promoted by the surroundings and weather yield an outstanding potential in balneotherapy, yet to be used to the fullest.

### **CLERMONT Health Center**

Covering the underground level of the main building of CLERMONT\*\*\*\* Hotel, the **Clermont Health Center** is the very core the hotel complex due to the state-of-the-art facilities, the quality of the services provided as well as the qualified personnel. The Wellness & Spa services target both the domestic and foreign markets.

# Natural therapeutic agents: mofette and mineral baths

Mofettes are a mix of gases resulting from post-volcanic fumaroles in the Curvature of the Carpathians, in which the therapeutic element is the 95 - 98% of carbon dioxide. The mofettes in this area are unique Europe and worldwide. Alongside carbon dioxide, mofette gas also includes other volcanic gases: ammonia, sulphur etc., as well as small concentrations of helium and radon causing the  $CO_2$  molecules to pulverise, which increases penetration. Carbon dioxide alone is not life-supportive, but used as a therapeutic agent (tegument absorption) it will bring about great benefits to blood circulation through peripheral and systemic vasodilation.

**Natural mofettes** cause an increase in the blood flow under the effect of the CO<sub>2</sub> penetrating the skin both at tegument and muscle levels. CO<sub>2</sub> acts onto the smooth muscles in the blood vessels, especially the very small vessels (arterioles), in a way that is considered more effective than peripheral vasodilation medicines. The procedure is done in orthostatic posture, for the lower part of the body for 5-20 minutes progressively.

As it is heavier, carbon dioxide sinks to the bottom of the mofette (corresponding to the lower half of the torso), the part where it is most beneficial for health. The much lower concentration of  $CO_2$  in the upper layers of mofette gases stimulate breathing, hence the volume of oxygen carried to the organs, including the brain, which results in higher brainpower.

Clermont Health Center also uses another natural therapeutic agent in the area – carbogaseous mineral water or carbon dioxide baths – the mineral water has a high content of dissolved carbonic gas.

A mineral bath combines the effect of both thermal and chemical factors and the hydrostatic pressure in water. The high content of carbonic gas, dissolved carbonic acid and the  $CO_2$  bubbles promote the formation of a delicate thermal-insulation film on the tegument placed in the tub when it comes in contact with the water. Through micro-tactile stimuli, the film leads to active vasodilation by means of capillary-mediated vasoactive agents, which improves peripheral circulation – it has a digoxin-like effect on the heart through the economic involvement of the heart without any other energy expense. It is done at a temperature of 33 – 34 degrees Celsius for 15 minutes, body fully or partially submerged.

Combining the same  $CO_2$  therapeutic agent into a mofette and bath leads to a cumulated effect of vasodilation. This means better replenishment of the tissue and cells, faster processing of normal or pathological metabolic waste and its transport to the specialized organs to be processed and eliminated, thus reducing the inflammatory process and restoring normal metabolic processes in the organs, tissues and cells.

Should the CO<sub>2</sub> bath or mofette have counter-indications, they may be replaced by other procedures with a similar effect.

#### **Facilities and services**

Clermont Health Center offers the following facilities and services:

- Natural mofette;
- The hydrotherapy section equipped with:
  - Tubs for carbogaseous water baths;
  - Tubs for **galvanic baths** and **aerosol**-generating equipment
  - Multifunctional tubs used for Jacuzzi, aroma hydrotherapy based on the addition of different plant extracts for relaxing purposes or underwater showers with general relaxing effects, though muscular deep massage with 3-6 atmosphere water jets
- State-of-the-art, computerized **electrotherapy** equipment based on low, medium and high frequency currents as well as low frequency electromagnetic fields. Electrotherapy is based on a physiological dose of electrical currents causing an overall positive effect on the human body without any interference with the cellular and hormonal balance. Medical procedures: **TECAR** therapy, interferential currents, diadynamic currents, Trabert currents, EMF (electromagnetic therapy), short wave radiation, ultrasound, laser therapy, lymphatic drainage massage;

- Medical manual massage room;
- **Medical gym** equipped for kinesiotherapy (rehabilitation workout), small group or individual rehabilitation exercises for specific conditions aimed at the recovery of the diminished or lost functions after certain diseases.

### **Medical conditions (indications, counter-indications)**

Clermont Hotel Health Centre provides relaxation and wellness services as well as preventive, curative or functional recovery treatments for a number of conditions. Prior medical examination is mandatory.

The Health Centre focuses on two types of services:

- **Prevention and treatment** of <u>cardiovascular disease</u>, <u>rheumatic disease</u> as well as different other conditions.
- **Replenishing the body** (wellness) through procedures aimed at promoting general relaxation in the body, improving the general state of health, fighting sedentary life, re-balancing the general muscular firmness, encouraging practicing a sport, balancing the nervous system, eliminating the physical and mental discomfort generated by daily stress factors, rebalancing sleep-activity and resteffort bio-rhythms, training adjustment functions for fighting stress, inducing the state of wellness.

Appropriate for everyone, irrespective of age, people suffering from physical or mental discomfort symptoms, fatigue, irritability and reduced professional efficiency, people practising neuropsychic intensive professions, experiencing imbalanced sleep-activity and rest-effort biorhythms.

Besides the actual therapies, the overall goal is to raise awareness on the harmful effects of smoking and alcohol, promote healthy food habits and exercise in open-air.

### Therapeutic indications of the natural agents in Covasna area:

#### Cardiovascular disease:

- Arteriopathies:
- a) obliterating arteriopathy in the inferior limbs, stages I and II. Those with clear surgical indication are excluded.
- b) Buerger's disease (thromboangiitis obliterans)
- Chronic ischemic cardiomyopathy
- a) sequelae of myocardial infarction within 6 months after the acute episode, for patients without abnormalities of the cardiac rhythm or angor animi and showing a good hemodynamic balance
  - b) stable pectoral angina, effort angina (under medicated treatment)
  - Arterial hypertension stages I and II under medical surveillance without any counter-indication for co-morbidities that exclude natural therapy
  - **Venous disease:** sequelae after superficial or profound thrombophlebitis
  - Valvular heart disease
  - a) rheumatism-associated valvular disease without clinical hemodynamic impairment
  - b) surgical patients of valvular disease, clinically and hemodynamically stable 3 months after surgery, referred by a cardiologist
  - Sequelae after stroke in cardiovascular balanced patients, referred by a neurologist

#### Rheumatic disease:

- Conditions of the locomotive system
- a) Degenerative articular and sub-articular disease such as arthritis
- b) Degenerative disease in the spine spondylitis
- c) Chronic inflammatory articular or spinal diseases only in the summer season for patients showing normal medical results
- d) Focal infection rheumatism (after treating the primary cause)
- e) Osteoporosis

#### Other conditions:

- Endocrine disorders, hypo-function in general
- Nutrition disorders: diabetes, obesity, gout
- Diseases of the peripheral nervous system: radiculopathies, polyneuritis, post trauma sequelae of the peripheral nervoes

#### **Counter-indications of balneotherapy:**

- a) general counter-indications: acute febrile illness, infectious diseases, STD in contagious stage, pathogen germ proliferation, malign or benign tumours with proven malignancy potential, any type of haemorrhage, pregnancy, epilepsy, system diseases, manifested chronic psychopathy, dermatological diseases with a communicable potential or big ugly lesions, manifested cardiac, renal or hepatic failure, patients who are not self-supportive.
- **b) specific counter-indications:** myocardial infarction with severe evolution in acute phase, ischemic cardiomyopathies with frequent seizures, painless cardiomyopathies with severe cardiac rhythm abnormalities, hear failure, valvular heart disease in association with heart failure or recent thrombotic stroke, arterial hypertension, stage III hypertension or arterial hypertension co-morbidities, cerebral atherosclerosis associated with psychic and behavioural illness, cerebral thrombotic stroke with major neurological sequelae.