

Participation in 'La Patrouille des Glaciers' needs healthy hearts

This endurance race has just finished and through it, a charitable project has benefited.

The 'Impulse' team made up of the two Norwegian brothers Oern and Ulf Stuge and the Swiss Alain Salamin, has just taken part in the legendary ski mountaineering race 100 km long, 8000 m total vertical difference (up/down) in late April.

Appreciating their good fortune to be in excellent physical health, an essential to participate, the team decided to dedicate their effort to raise funds for children with heart failure through the ESC humanitarian project, 'European Heart for Children'.

La Patrouille des Glaciers: the Alpine Legend



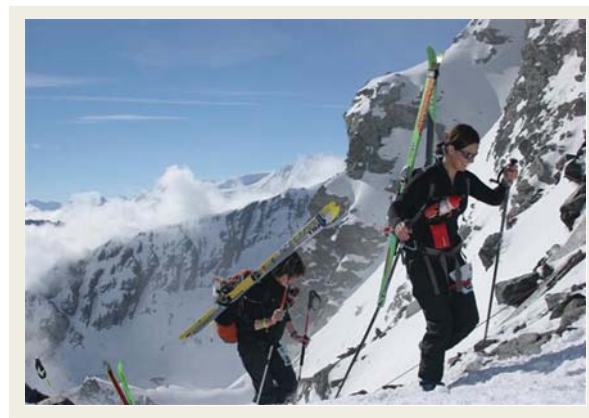
Climbing above the clouds

The 'Patrouille des Glaciers' is the most prestigious and difficult ski mountaineering race in the world.

It starts in Zermatt (1616 m above sea level) at night with team patrols setting off between 10 PM and 3 AM. They traverse the Matterhorn's North face ascending to reach the highest point of the race, Tête Blanche, at 3650 m.



Teams crossing mountainside



Steep ascent

Thereafter, they follow a long and dark downhill portion, where all the team members need to be roped together because of crevasses, to reach Arolla at 1980 m. The village is at the middle of the race with three more mountain passes to be climbed and skied down before the teams arrive in Verbier at 1520 m altitude.

Altogether, the race represents more than 50 km distance as the crow flies (110 km equivalent effort) with a sum total altitude difference of more than 4000 m, to climb up and of course to ski down!

This mythical race was created in 1943 in the middle of World War II, when the Swiss Army decided to organize this team competition across the Swiss Alps for the first time. It was a test to see if the Alpine soldiers would be able to run such a tremendous distance with so much climbing and downhill.

Only two teams of the 18 patrols that started arrived in Verbier that year, but the legend was born. In 1944, 44 teams participated, but for a few years no races were organized because of the war.

The third race in 1949 was dramatic: on April 10th, three participants disappeared into a crevasse while skiing down from Tête Blanche and were found dead 8 days later. In light of this tragedy, organizing the race was prohibited by the Federal Military authorities.

It was only in 1984 that the competition was revived again and was then opened to civilians. That year 570 competitors participated in the long race from Zermatt, and the short one from Arolla.

The attraction of this legendary race has never stopped increasing. It has now become so popular that the organization has to limit the number of participants to 4200 for security reasons.



2010 has been the 14th race.

The Impulse Team in Verbier



Left: Oern Stuge (55) MD, former executive at Medtronic, now CEO of Impulse Dynamics.

Centre: Alain Salamin (48), human resource executive at Medtronic.

Right: Ulf Stuge (54) Oern's brother, an oral Surgeon in Oslo, Norway.

They have all participated in the race before.

The European Heart for Children project is a humanitarian initiative of the ESC. Its aim is to promote treatment of congenital heart disease in those ESC countries where such treatment is still problematic.

Someone once said that life is a race. Nothing could be closer to the truth. But, there are different types of races in one's life, and one cannot win them all!

It is not by chance that participants of the 14th race 'La Patrouille des Glaciers' decided to support the ESC project 'European Heart for Children'. Their own hearts will struggle to cope with the enormous workload imposed on them by this 100 km race. Equally, the hearts of so many unlucky children are today struggling with the most important race of all—life. There is little doubt that the 4200 participants will have reached their goal and crossed the finishing line. Unfortunately, the same cannot be said for a large number of children with congenital heart disease. Many of them never cross the finishing line alive. So... I would like to thank all of the participants. Your hearts this year beat for La Patrouille des Glaciers and by doing so will allow at least some children suffering from congenital heart disease to win their race also.

O. Stuge, R. Ferrari

Pioneers in cardiology: Harald Reuter

The discovery of calcium ion channels in the heart was a landmark for the worldwide development of cardiovascular drugs

The breakthrough of Reuter as a leader in the science of excitable tissues came with a work published in the *Journal of Physiology* (1967)¹ and carried out at the Department of Physiology of the University of Bern, Switzerland. Reuter demonstrated, for the first time, the existence of an inward current carried by Calcium ions in cardiac Purkinje fibres. This work represents a basic element for our understanding of the effect of the

autonomous nervous system on the heart and of a worldwide development of drugs that nowadays play a crucial role in the treatment of cardiac failure and arterial hypertension. Just a year later, in 1968,² Reuter and Seitz demonstrated the existence of a $\text{Na}^+/\text{Ca}^{2+}$ exchange mechanism, a further key element in the regulation of cardiac intracellular Ca^{2+} homeostasis and contraction. The biophysical behaviour and molecular nature of Ca^{2+}