



HEART CLINIC
ZÜRICH

INTERDISCIPLINARY
EXPERTISE IN
HEART DISEASE
**SWISS CENTRE FOR
CARDIOLOGY AND
HEART SURGERY**



HEART CLINIC
ZÜRICH

HIRSLANDEN
KLINIK HIRSLANDEN

HEART VALVE
CENTER

HEART CLINIC
ZÜRICH

HeartClinic Zurich
Witellikerstrasse 40 | CH-8032 Zurich
+41 44 387 97 00
heart@www.swiss-heart-clinic.com
www.swiss-heart-clinic.com
www.swiss-heart-valve-center.com



WELCOME

HEART-TEAMS AT THE HEART CLINIC HIRSLANDEN

The Heart Clinic Hirslanden has internationally renowned heart specialists with many years of experience in the treatment of heart disease. Thanks to state-of-the-art diagnostics and imaging and the interdisciplinary Heart-Team approach, our patients benefit from high-quality care before and after cardiological or surgical intervention of the heart.

At the Heart Clinic Hirslanden, patients are evaluated in heart team meetings in order to ensure the best possible individual patient care (“patient-based medicine”).

The team concept has been recommended for each heart centre in the recommendations of the European Society of Cardiology and Heart Surgery since 2012.

Interdisciplinary expertise and cooperation in the prevention and diagnosis as well as interventional and surgical treatment of heart disease.

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- Heart checkup (prevention)
 - Coronary heart disease
 - Cardiomyopathy (cardiac insufficiency) and high blood pressure (Hypertension)
 - Heart valves diseases – Swiss Heart Valve Center
 - Cardiac arrhythmias and atrial fibrillation
 - Aortic Aneurysm (enlarged aorta)



HEART CLINIC HIRSLANDEN

HEART MEDICINE AT THE HIGHEST LEVEL



**Prof. Dr. med.
ROBERTO CORTI**

CARDIAC DIAGNOSTICS, HEART IMAGING AND INTERVENTIONAL CARDIOLOGY

Our cardiology team consists of non-invasive and invasive (interventional) specialists. Invasive cardiology includes catheter-based examinations and therapeutic measures.

Professor Roberto Corti (MD) is a cardiologist and founding partner of the Heart Clinic Hirslanden. His expertise includes invasive cardiology, catheter-based heart valve interventions (TAVI & MitraClip, tricuspid clip), coronary interventions, left atrial appendage closure, as well as closure of atrial septal defect (ASD) and closure of persistent foramen ovales (PFO).



**Prof. Dr. med.
JÜRIG GRÜNENFELDER**

HEART SURGERY

The heart surgery team offers the entire spectrum of cardiac surgery procedures from congenital and acquired diseases to injuries to the heart and the vessels close to the heart with a special focus on minimally invasive valve surgery.

Professor Jürg Grünenfelder (MD) is a specialist in cardiac and thoracic vascular surgery. Together with Prof. Corti he is a founding partner of the Heart Clinic Hirslanden. His areas of expertise are minimally invasive valve surgery (DaVinci), bypass surgery for coronary artery disease, replacement of the aorta in the case of aneurysm (ascending and aortic arch surgery).

INTERDISCIPLINARY TEAM AT THE HEART CLINIC HIRSLANDEN

Our team consists of 12 internationally recognized specialists who cover the entire spectrum of modern heart medicine. We offer comprehensive clarification, consultation and treatment, either as an outpatient or inpatient, depending on the clinical picture. We work closely together with our referring cardiologist and family doctor and, if desired, also support patients in the post-operative care.



**Prof. Dr. med.
ROBERTO CORTI**

Interventional
Cardiology



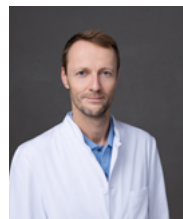
**Prof. Dr. med.
JÜRIG GRÜNENFELDER**

Heart Surgery



**Dr. med.
THIERRY AYMARD**

Heart Surgery



**PD Dr. med.
PATRIC BIAGGI**

Cardiology &
Heart Imaging



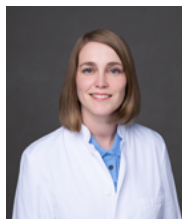
**Prof. Dr. med.
OLIVER GAEMPERLI**

Interventional
Cardiology



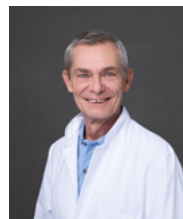
**PD Dr. med.
DAVID HÜRLIMANN**

Cardiology &
Cardiac Rhythmology



**Dr. med.
SILKE KÜEST**

Cardiology &
Heart Imaging



**Prof. Dr. med.
GEORG NOLL**

Cardiology &
Prevention



**Dr. med.
IVANO REHO**

Cardiology &
Aortic Aneurysm



**PD Dr. med. (H)
DIANA RESER**

Heart Surgery



**Prof. Dr. med.
PETER M. WENAWESER**

Interventional
Cardiology



**Prof. Dr. med.
CHRISTOPHE WYSS**

Interventional
Cardiology



SWISS HEART VALVE CENTER

The heart valve centre of the Heart Clinic Hirslanden is the largest private heart valve centre in Switzerland. The Swiss Heart Valve Centre has a well-established team of interdisciplinary specialists in diagnosis and heart imaging, interventional cardiology and heart valve surgery. The experience and expertise of the team is a very important factor for the success of a heart valve therapy.



Please contact us by phone or e-mail.
We are here for you.

+41 44 387 97 00
www.swiss-heart-valve-center.com

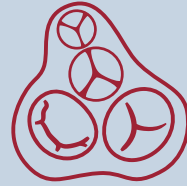
HEART VALVE DISEASES: STENOSIS AND INSUFFICIENCY

Diseases and defects of the heart valves can proceed without symptoms. In most cases, however, diseased heart valves will sooner or later cause symptoms. The aortic valve and the mitral valve are the valves most frequently affected by disease.

The causes of the disease are usually age-related degeneration. With age, valves can thicken and narrow (aortic valve) and thus greatly reduce the blood flow in the body.

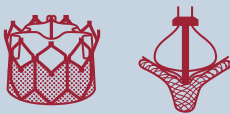
Important symptoms that indicate such a heart valve defect are shortness of breath, which occurs mainly during physical exertion, rapid fatigue and a severe drop in performance.

DIAGNOSIS OF HEART VALVE DISEASES



For the diagnosis of heart valve disease, an external ultrasound examination (echocardiography) is usually sufficient. In certain cases, stress echocardiography (heart ultrasound during or after exercise) and swallow echocardiography (ultrasound probe via the esophagus behind the heart) provide additional information. Further clarification is provided by means of computer tomography and cardiac catheterisation.

CATHETER-BASED INTERVENTIONS



Catheter-based procedures are nowadays an established procedure for narrowed (stenosis) or leaking (insufficiency) heart valves.

Minimally invasive catheter methods include TAVI for implantation of an aortic valve prosthesis or clipping procedures for reconstruction of the leaking mitral valve (MitraClip) or tricuspid valve.

HEART VALVE SURGERY



For severely diseased heart valves, surgical methods are available for the replacement or reconstruction of the aortic, mitral or tricuspid valve.

Whenever possible, the heart surgery team operates with the video-assisted keyhole technique (minimally invasive, possibly with Da-Vinci-Robot).



EXPERTISE AT THE HEART CLINIC HIRSLANDEN

CORONARY HEART DISEASE (NARROWING OR BLOCKAGE OF THE CORONARY ARTERIES)

Coronary heart disease is a disease of the coronary arteries. Deposits (fat, calcium, and thrombi) cause a narrowing of the blood vessels (arteriosclerosis). The result is a lack of blood circulation in the heart muscle, which can cause the risk of a later heart attack or heart failure (weakness of the heart muscle). Typical of coronary heart disease is attack-like pain in the chest (angina pectoris).

Diagnosis and cardiac imaging

Depending on the patient, various procedures are used to clarify a circulatory disorder of the heart muscle or to localize narrowed coronary arteries: functional test (stress ECG), stress echocardiography, coronary CT or coronary angiography are the most important tests.

Interventional Cardiology

Catheter-based stent implantation in narrowed coronary arteries can dilate a narrowed coronary artery and thus restore optimal blood flow in the coronary arteries.

Heart surgery

Bridging of severely constricted or completely blocked coronary vessels by a bypass operation using the body's own arteries or veins.



CARDIOMYOPATHY (HEART FAILURE) AND HIGH BLOOD PRESSURE (HYPERTENSION)

Heart failure is the inability of the heart to supply the body with sufficient blood and oxygen due to a “weak or stiff heart pump”.

The result is a lack of blood circulation, which can lead to reduced performance, especially at an advanced age. Typical for heart failure is shortness of breath. The optimal therapy, developed by our interdisciplinary HeartTeam, depends on the appearance and stage of the heart failure.

Cardiological therapy methods

The basis of any treatment of heart failure is drug therapy. If additional valvular problems are present, they will be treated according to the international guidelines (see Swiss Heart Valve Center).

For patients with heart failure, Cardiac Resynchronization Therapy (CRT) helps in selected cases to improve the synchrony of the left and right ventricles. In case of life-threatening rhythm disturbances, the implantation of a defibrillator (ICD) is recommended to protect patients from sudden cardiac death.

HEART CHECK-UP

Prevention against heart disease

The heart check-up is a tool to determine your risk factors as well as diagnose heart disease. Preventive measures can then be taken to lower the risk for cardiovascular disease. Cardiovascular diseases are the number one cause of death. Unfortunately, life-threatening diseases such as heart attack or stroke often occur without warning (silent killers). Around 90 percent of all heart attacks or strokes are caused by risk factors that can be measured and influenced.

In principle, we recommend that a heart check-up for all persons from the age of 50. Especially persons with a family history of cardiovascular disease should be checked on a regular basis.



CARDIAC ARRHYTHMIAS AND ATRIAL FIBRILLATION

Cardiac arrhythmia is a pathological decrease (= bradycardia) or acceleration (= tachycardia) of the heart rate or an irregular heart beat.

Atrial fibrillation is the most common cardiac arrhythmia. It involves a change in the electrical excitation of the heart, which will lead to irregular heart beats with bradycardia or tachycardia untreated, atrial fibrillation can increase the risk of stroke and further reduce the heart function

Cardiological therapy methods

The basis for the treatment of atrial fibrillation is drug therapy (blood thinner) to prevent a stroke.

Catheter ablation in atrial fibrillation

Ablation using a special catheter is a proven therapy for atrial fibrillation, especially when rhythm control is required. For this purpose, an electrophysiological study (EPS) is carried out to find different locations on the inner side of the heart that are responsible for these rhythm disturbances. Afterwards, the catheter is heated with radio-frequency current in order to create specific scarring in the heart tissue. The lesions produced have the aim of limiting the spread of the electrical impulses and thus preventing atrial fibrillation, as well as reducing the need for medication.



AORTIC ANEURYSM (ENLARGED AORTA)

The most common disease of the aorta is a dilatation (aneurysm). An aortic aneurysm is an enlargement of the aorta by more than twice the usual diameter.

The cause of an aortic aneurysm is usually advanced arterial calcification (atherosclerosis). Furthermore, high blood pressure and old age favour the formation of an aortic aneurysm.

Diagnosis and imaging

Prior to aortic aneurysm intervention, the exact location and extent of the aneurysm is determined by means of computed tomography (CT), magnetic resonance imaging (MRI), ultrasound and aortography.

Interventional Stent Treatment (=EVAR, endovascular aortic repair)

If aortic aneurysm disease affects the descending aorta, it can be stabilized by placing a catheter-based stent prosthesis over the inguinal vessels.

Surgical interventions

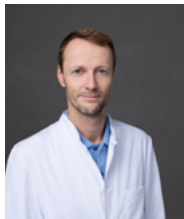
If the ascending aorta is involved replacement of the aorta with an artificial graft is recommended. In cases in which the aortic valve is also diseased aortic root replacement with aortic valve prosthesis (composite replacement according to Bentall) is performed. In case of combined diseases of the aortic root and the aortic valve, the composite replacement can counteract complex aneurysm diseases.

Tirone David surgery for aortic aneurysm: The David procedure offers the possibility to preserve or reconstruct the native (natural) aortic valve while replacing the aortic root.

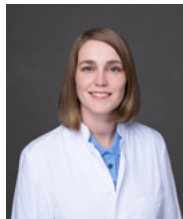
Replacement of the aortic arch: Depending on the extent of the aneurysm, the aortic arch can be partially or completely replaced or in combination of surgery and stent placement is applied.



UNITS AT THE HEART CLINIC HIRSLANDEN



**PD Dr. med.
PATRIC BIAGGI**



**Dr. med.
SILKE KÜEST**

CARDIAC IMAGING

- Echocardiography (2D, 3D): transthoracic, transoesophageal
- Cardio CT (= computer tomography) and 3D reconstruction: structural heart disease, coronary artery disease
- Cardio MRI (= magnet resonance imaging): structural heart disease, assessment of heart function



**Prof. Dr. med.
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OLIVER GAEMPERLI**



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**Prof. Dr. med.
CHRISTOPHE WYSS**

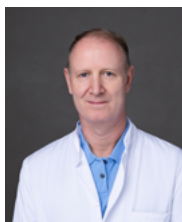
INTERVENTIONAL CARDIOLOGY

- Coronary angiography and percutaneous coronary intervention (PCI)
- Catheter-based interventions:
 - TAVI (= transcatheter aortic valve implantation)
 - MitraClip / Tricuspidclip
 - PFO- (patent foramen ovale) and ASD- (atrial septal defect) closure
 - LAA- (= left atrial appendage) closure



CARDIAC SURGERY

- Coronary artery bypass graft surgery (CABG)
- Heart valve surgery (Repair and replacement of Aortic, Mitral and Tricuspid Valves)
- Thoracic Aortic Aneurysm Surgery
- Surgical repair of atrial septal defect (ASD) and ventricular septal defect (VSD)



Prof. Dr. med.
JÜRIG GRÜNENFELDER



Dr. med.
THIERRY AYMARD



PD Dr. med. (H)
DIANA RESER

Minimally invasive surgical technique is the main focus of the cardiac surgery unit at the Hirslanden Heart Clinic. Whenever possible, our heart surgeons perform minimally invasive operations using the video-assisted keyhole technique (i.e. Da-Vinci).

With the minimally invasive surgical technique, we enable patients to benefit from reduced surgical trauma, less pain, faster recovery and smaller scars in contrast to sternotomy surgery via the chest opening.

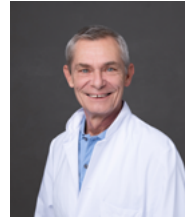
This technique is mainly used for the replacement or reconstruction of heart valve surgery (aortic valve, mitral valve, tricuspid valve).



**PD Dr. med.
DAVID HÜRLIMANN**

ARRHYTHMIA AND HEART DEVICES

- Long-term ECG monitoring (24h up to 7 days)
- Reveal implantation
- Pacemaker / implantable cardioverter-defibrillator (ICD), incl. subcutaneous S-ICD and cardiac resynchronisation therapy (CRT)
- Electrophysiological studies (EPS) and catheter-based ablations



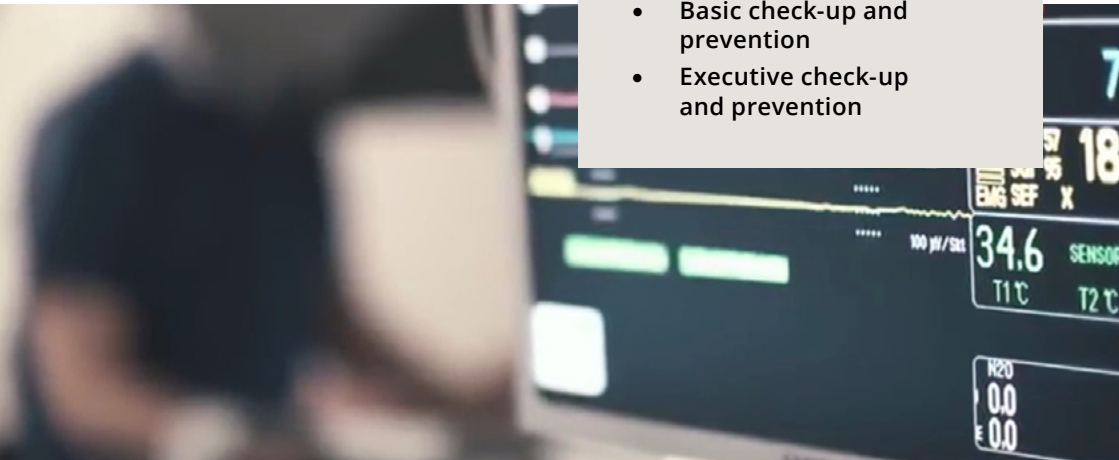
**Prof. Dr. med.
GEORG NOLL**

HEART FAILURE AND HYPERTENSION

- Advanced heart failure and hypertension medication
- Catheter-based valve intervention (MitralClip / TAVI)
- CRT Implantation (= cardiac resynchronisation)

HEART CHECK-UP

- Basic check-up and prevention
- Executive check-up and prevention





SWISS HEART CLINIC

INTERNATIONAL MEDICAL CONCIERGE

CONSIDERATION OF SPECIAL NEEDS OF OUR INTERNATIONAL PATIENTS



The Hirslanden Clinic and the Heart Clinic Hirslanden have a long tradition of treating patients from all over the world.

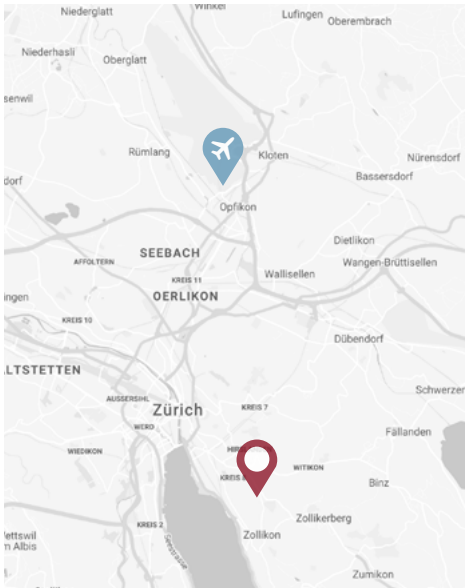
In order to ensure that diagnoses, as well as outpatient and inpatient treatment, run smoothly, our clinic management, in cooperation with Hirslanden International, takes care of all administrative and organisational matters relating to a smooth visit and stay.

Our internationally experienced team of doctors is multilingual. We also have a network of professional interpreters who we call in for international consultations.

All patients, regardless of their religious views of the world, are advised and medically cared for at the Heart Clinic Hirslanden with the greatest possible respect and in consideration of their individual wishes during their stay.

At the Hirslanden Clinic we also have the infrastructure to guarantee international patients and their relatives the desired privacy during their stay.





Please contact us by phone or e-mail.
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