

Demo

Dear madam, sir,

Thank you for your interest in our e-book!

This demo consists of a **random** number of selected pages of the e-book “**The Heart**” which will show you immediately the **many possibilities** of this publication. In the left column you see the **table of content** which shows clearly that **all aspects** of this subject are reviewed thoroughly. Use the right scroll bar, the arrows on your keyboard or the scroll wheel on your mouse to **go through this demo**. To watch the **video** belonging to picture 35 you just click the picture.

All our e-books can be **rented** or **bought**. Each bought e-book can be downloaded on **six different computers** and can be **printed** in colours as well as in black/white. You decide when you want to download a bought e-book on a second, third, ... computer. That makes it possible to download your already bought e-book only after a few years, for example when having bought a new computer. Rented e-books can only be downloaded on one computer and are available for 24 hours. A rented e-book cannot be printed.

The **only software required** to read the e-books is Adobes free [Digital Editions](#). You just need to **activate** this software before downloading the bought e-books on several computers.

The Adobe ® [Digital Editions](#) software offers a **fascinating way** to view and manage e-books and other digital publications.

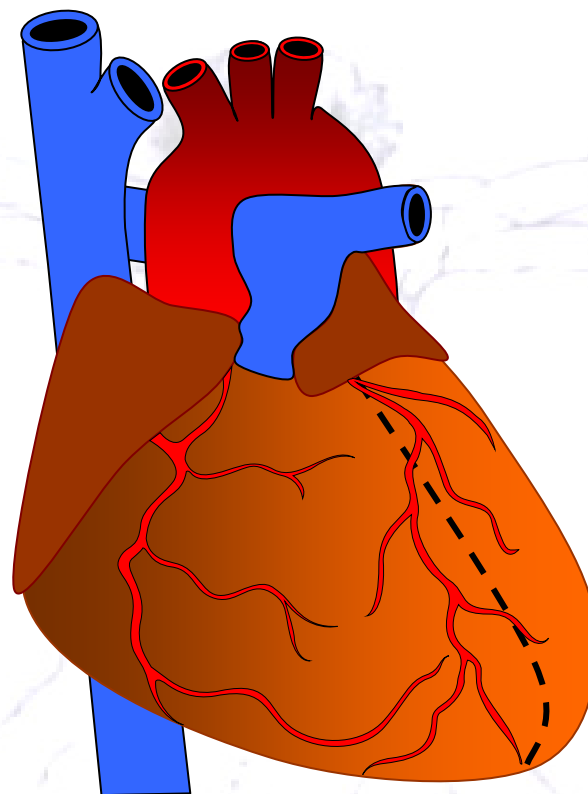
Downloading an e-book on your computer takes less than one minute:

1. Choose the e-books you want to rent or buy
2. Leave your e-mail address
3. Confirm your order by an online payment
4. E-books can now be downloaded on your computer

Enjoy your reading!

Grégoire Lason – Luc Peeters

The heart



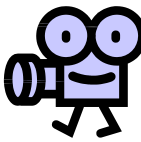
Luc Peeters

Grégoire Lason

All rights reserved. Osteo 2000 bvba © 2010. No part of this e-book may be reproduced or made public by printing, photocopying, microfilming, or by any means without the prior written permission of the publisher.

Contact: Osteo 2000, Klein Dokkaai 3-5, B – 9000 Ghent, Belgium - Tel: +32 9 233 04 03 - Fax: +32 55 70 00 74





1. Introduction

One of the principles in osteopathic medicine is optimisation of the circulation in the region of complaint. The heart obviously plays an important role in this.

How can the osteopath improve the local circulation if the heart is not in an optimal state of function? The correction of cervical, upper thoracic, costal, diaphragm and craniosacral lesions*, together with stretching of intrathoracic fascial retractions, the mobilisation of the blood pressure regulating organs and advice related to diet and general lifestyle are therefore important.

Heart dysfunctions often dominate the complaint of a patient without there being a specific heart complaint as such. The osteopath can quickly identify this by way of somatic dysfunctions in the region T₁-T₅.

In this e-book, the functional anatomy, physiology and neurology are discussed as well as the heart mobility and the ways in which the osteopath deals with such dysfunctions.

** PS: a lesion is a functional loss of mobility. The term lesion has another meaning in osteopathy than in classic medicine where it refers to a structural defect in the human structure.*



2. Anatomy

2.1. Position

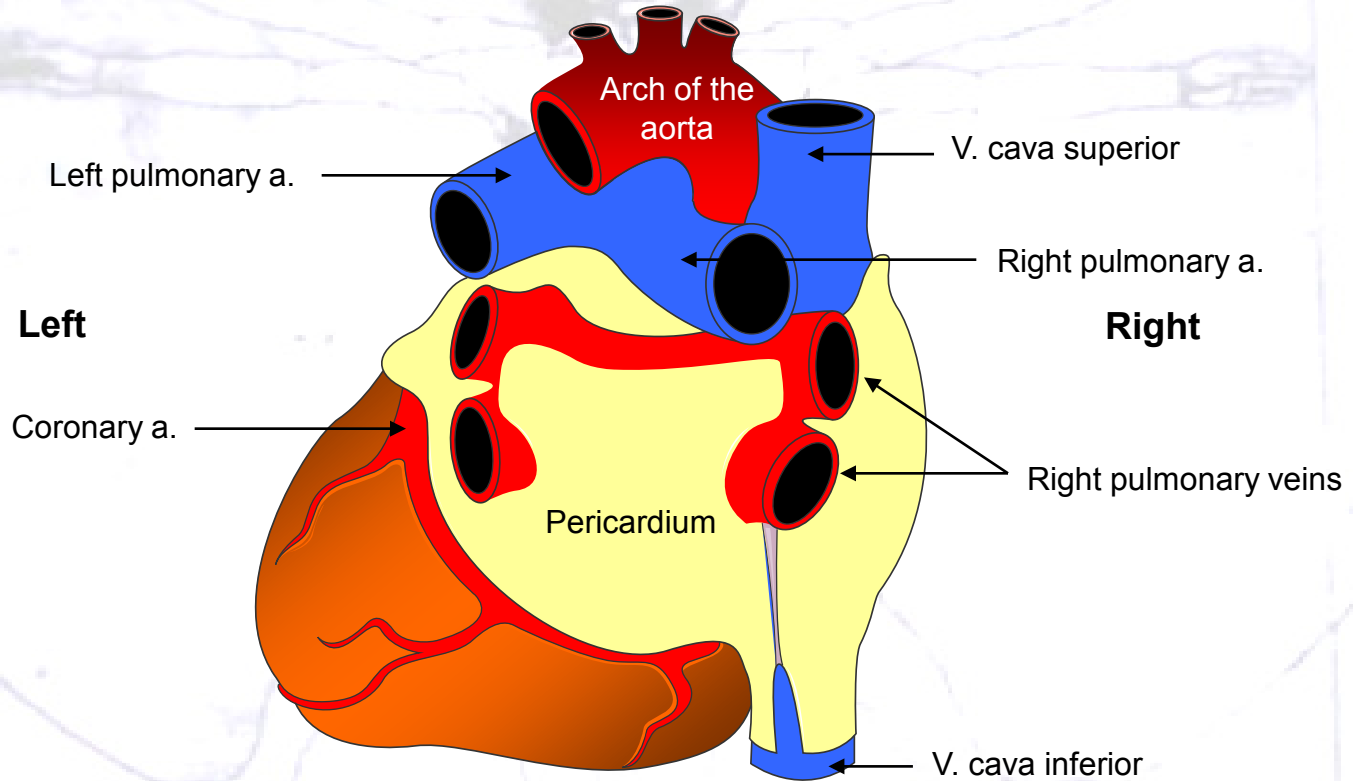
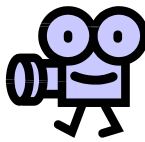


Figure 7 - The posterior aspect of the heart



3. Physiology

3.1. General

The deoxygenated blood is sucked into the right atrium from the inferior and superior v. cava (*Figure 15a*). The right atrium must be functioning optimally otherwise back flow will occur into the jugular v. as well as venous congestion of the liver. Osteopathic liver drainage has no effect without adequate treatment of the right atrium.

Oxygenated blood from the lungs is sucked into the left atrium (*Figure 15a*).

Blood from the right atrium flows to the right ventricle (*Figure 15b and c*) where it is sent to the lungs (*Figure 15d*).

Blood from the left atrium flows to the left ventricle (*Figure 15b and c*) then back to the systemic circulation via the aorta (*Figure 15d*). (*Anderson & Ho 1998*)

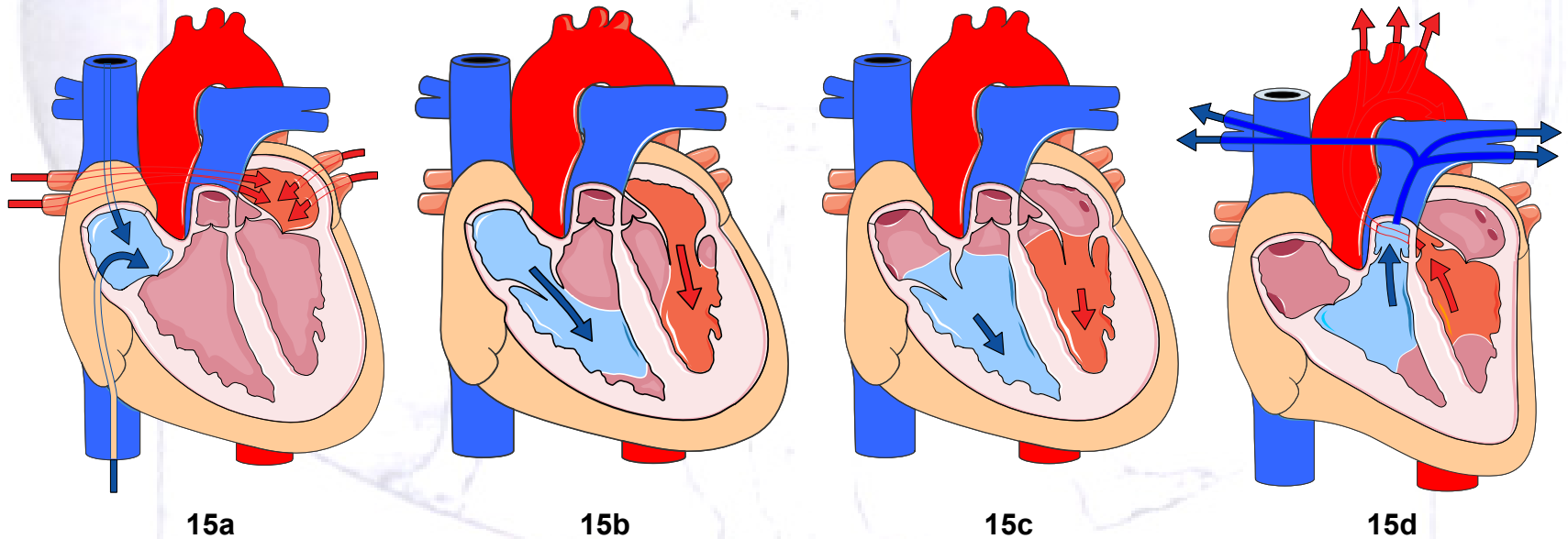
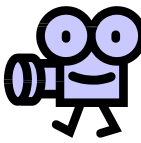


Figure 15 - Blood flow in the heart



5. Patient history and physical diagnosis

5.3. Congestive heart failure

The treatment of heart failure must focus on:

- Training of the heart muscle.
- The neurohormonal influences.
- The hormonal system (renin, angiotensin, catecholamine).
- Blood volume regulation.
- Lying on the right side is a position that patients with heart failure spontaneously adopt more frequently. Such patients have an increased sympathetic activity and a decreased parasympathetic activity to the heart. Lying on the right side spontaneously normalises this. The mechanism behind this is not yet known but it has been noted that in this position the heart is more vertical. Osteopathic treatment aims to improve the descent of the diaphragm, which also pulls the heart more vertically.

Training of the heart muscle: this means that the patient must follow a personalised exercise program. (*Mein et al 2000*)

The neurohormonal influences: this means that the osteopath must aim to balance the sympathetic and parasympathetic system of the patient. It should not be forgotten that parasympathetic activity lowers the heart rate and decreases the cardiac output. The sympathetic system increases the heart rate, the contractility, the rhythm and results in a peripheral vasoconstriction.

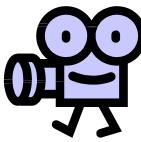
The osteopath must be able to correctly judge the state of the patient and identify which actions aimed at the neurovegetative system will provide most benefit to the patient.

The hormonal system: both the kidneys and adrenal glands must be of optimal function. Therefore the relevant segment must be corrected. External stressors must also be addressed. Too much long-term stress leads to adrenal exhaustion. Consumption of Na^+ must also be restricted.

Vasoconstriction and blood volume: limited consumption of salts and a good balance between rest and activity.

6. Clinical diagnosis

(Bikley 1999, Sapira 1990, Seidel et al 2006)



6.1. Observation

The best position to observe the patient is sitting with the upper body at 45°. An important observation of any distension of the right internal and external jugular veins.

6.1.1. Internal jugular vein (Figure 33)

This blood vessel is a direct link to the right atrium and can be seen as a manometer of the right atrium. Distension of the internal jugular vein indicates an increase of the central venous pressure and this is an important indicator of the cardiac function. The distension occurs together with a pulse. If distension and pulsation are present this indicates a condition of the right atrium or a tricuspid condition. Appropriate referral is important.

The test is to observe this distension and pulsation of the internal jugular vein.

The identification of this distension of the internal jugular vein is difficult because the vein runs deep under soft tissue and because this vessel normally has lower pressure than the carotid a. It is difficult to know whether the observed pulsation is from the artery or the vein.

Some remarks:

The right internal jugular vein runs between the two heads of the sternocleidomastoid m. and then in a cranial direction towards anterior surface of the ear. The carotid a. is medial to the sternocleidomastoid m.

Normally, a light concavity is present between the two heads of the sternocleidomastoid m. If a convexity is seen this indicates distension of the internal jugular vein.

During observation pulsations are looked for in the internal jugular vein.

If uncertain whether the pulsation is from the carotid a., the radial pulse can be palpated and the compared to the observed pulsation. An arterial pulse is forceful but a venous pulse is weak and diffuse. The arterial pulse is palpable, the venous pulse is not.

If a pulsation is observed in the internal jugular vein the tester should try to evaluate how high the pulsation is. The pulsation will be higher lying compared to sitting.



6. Clinical diagnosis

6.2. Palpation

Palpation of the cardiac pulse is done with the right hand flat upon the left hemithorax; thenar and hypothenar on the sternum and the index finger under the nipple. For female patients the right hand is placed under the left breast.

The osteopath pays attention to:

- Is there a point of maximum pulsation that can be localised at the height of the apex of the left ventricle? Try to localise this point with the fingertip.
- Normally this point is the size of a coin along the midclavicular line at the height of the 5th intercostal space.
- In cases of left ventricle enlargement (previous infarct(s)) this point will be displaced laterally. An obvious enlargement can mean that the point is found along the axillary line.
- If this pulse point is not readily found this does not always indicate pathology. Palpation of the point with the patient lying on the left side can aid the palpation.

Palpation of the apex:



Figure 35 - Palpation of the apex



9. About the authors



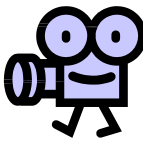
Grégoire Lason
Gent (B), 21.11.54



Luc Peeters
Terhagen (B), 18.07.55

Both authors are holders of university degrees, namely the Bachelor of Science with honours in Osteopathic Medicine, and are very active with the promotion and academic structuring of osteopathy in Europe. In 1987 they began The International Academy of Osteopathy (IAO) and are, to this day, the joint-principals of this academy. The IAO is since several years the largest teaching institute for osteopathy in Europe. Both osteopaths are members of diverse professional organisations, including the American Academy of Osteopathy (AAO), the International Osteopathic Alliance (IOA), the World Osteopathic Health Organisation (WOHO), as part of their mission to improve osteopathic development.

This osteopathic encyclopaedia aims to demonstrate the concept that a proper osteopathic examination and treatment is based upon the integration of three systems: the musculoskeletal, visceral and craniosacral systems.



This e-book is a publication by Osteo 2000 bvba.

Are you interested in publishing an e-book with us, do you have any questions or suggestions? Contact us via:


Mail:



Fax: +32 55 70 00 74

Tel: +32 9 233 04 03

Visit:

- The website of **Osteopedia**:  where you can view the other e-books by the same publishers.
- The website of **The International Academy of Osteopathy - IAO**:

