# Schüssler Express #116

## THE HUMAN MUSCULOSKELETAL SYSTEM

## FOUNDATION FOR MOBILITY AND HEALTH

Our musculoskeletal system is a complex system consisting of bones, muscles, joints, tendon, ligaments, and fascia. This ingenious structure enables us to move, remain upright, walk, run, and much more — it is the foundation for physical activity. A well-functioning musculoskeletal system is decisive for our health and well-being.

## Anatomy of the Human Musculoskeletal System

The human musculoskeletal system consists of many elements that are harmoniously intertwined: **Bones, Muscles, Joints, Tendons, Ligaments,** and **Fasciae.** The smooth cooperation of these anatomic structures enables both **stability** and **movement.** 

## **The Bones**

The skeletal system consists of **206 bones**. They form a **structure** that gives us **support** and at the same time **protects our organs**. The spine, as a central element, is of particular importance for our upright posture and the body's stability.

### The Muscles

There are more than **600** different muscles in the body. Depending on their function they are divided into skeletal muscles, organ muscles, and heart musculature. Muscles are the power generators in the body, responsible for the active movement. When muscles contract, they put bones and joints into motion.

## Joints are the connections between our bones.

There are different types of joints e.g., ball-and-socket joints, hinge joints, and rotary joints. Each type of joints facilitates different movements such as bending, stretching, and rotating.

### The Tendons

Tendons consist of connective tissue and connect muscles and bones. The transmit muscle strength on to the bones and thus enable us to perform movements.

## The Ligaments

**Ligaments** are, the same as tendons, connective tissue structures. The **connect the bones with each other** and stabilise our joints. Ligaments provide support in **control of movements** and **protect the joints** from injuries.

## The Fasciae

Fasciae consist of connective tissue and traverse the entire body. They **envelop muscles**, **organs**, **and nerves**. Fasciae provide additional **support** and at the same time take care of **mobility**.

## The Active- and Passive Musculoskeletal System

The human musculoskeletal system can be split into two categories: the active musculoskeletal system with its movable parts and the passive musculoskeletal system with the non-moving parts.

## The Joints

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Both systems work closely together to enable smooth, coordinated movements.

## The Active Musculoskeletal System consists of:

- Skeletal musculature
- Tendons
- Tendon Sheaths
- Bursae
- Fasciae

## The Passive Musculoskeletal system comprises:

- Bones (skeleton)
- Joints
- Ligaments
- Cartilage
- Spinal discs

## **Duties of the Musculoskeletal System – More than Posture and Movement**

The human musculoskeletal system has various duties. These include the **upright posture** and **movement** on the one hand, and on the other hand it **protects** our **sensitive internal organs** from injuries. The nervous system is embedded into the spine. Furthermore, the musculoskeletal system is responsible for the **renewal of blood cells in the bone marrow**. The skeletal musculature influences our **metabolism** and **immune system.** In short: The musculoskeletal is the basis for an active life.

## When the Musculoskeletal System Aches

The functions of the musculoskeletal system can become restricted by lots of factors. **Insufficient exercise**, **false postures**, and **wrong diet** can cause discomfort. A number of **illnesses** can also constrain the musculoskeletal system for example:

- Backache
- · Rheumatoid arthritis
- Osteoarthritis (arthrosis)
- Osteoporosis
- Gout
- Rheumatism

These diseases are often accompanied by **pain** and have a negative influence on the **quality of life.** In order to prevent movement restrictions and problems it is recommended to invest early into the health maintenance of the musculoskeletal system.

## How to support the Musculoskeletal System

An operative skeletal and locomotor system requires sturdy bones, healthy joints and muscles, elastic tendons, and ligaments, as well as flexible fasciae. As these structures are involved in all movements, day in and day out, they are exposed to severe strains.

Tips to give your Musculoskeletal System a Treat

- Get physically active regularly. Even a short walk does the world of good for body and soul.
   Regular sport purposefully strengthens muscles and bones.
- Hold yourself upright. An upright posture reduces the wear and tear of the articular surfaces and prevents joint aches.
- Be mindful of joint-friendly movements on a daily basis. This includes correct lifting- and carrying techniques, and also joint-friendly sports.
- A balanced, healthy diet provides the boy with essential minerals and vitamins. A calcium-rich diet is particularly important for strong bones. Reduce excess weight to relieve the musculoskeletal system.

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- Avoid relieving- and false postures. They cause one-sided strain of spine and muscles.
- Relaxation techniques not only help to reduce stress levels, but they can also resolve tensions. Try anti-stress techniques such as progressive muscle relaxation, breathing techniques, or autogenic training.

## **Exercises for Back and Fasciae**

Movement is very important for a pain-free locomotor system. Targeted stretch- and strengthening exercises straighten out the spine, relieve tension, and prevent serious problems.

To loosen unpleasant adhesions of the fascial connective tissue and keep it smooth, purposeful fascial exercises are recommended.

## Schüssler-Salts to support the Musculoskeletal System

The main Schüssler-Salts to support the musculoskeletal system are:

- No. 1 Calcium fluoride 12X
- No. 2 Calcium phosphate 6X
- No. 11 Silica 12X
- No. 3 Ferrum phosphate 12X
- No. 4 Potassium chloride 6X
- No. 6 Potassium sulphate 6X
- No. 7 Magnesium phosphate 6X

External applications of respective creams, or lotions (only available No. 1, 7, and 11) are also beneficial.

The Institute of Biochemic Medicine (Asia – Pacific)

## The Clinical Science of Biochemic Therapy

This year's 4-day seminar in Perth was well attended by new-, and revision students. Participants were keen to learn about the fascinating subject of Schüssler's biochemistry, and revision students appreciated the opportunity to brush up on and deepen their knowledge.

The venue 'Vivacious Living Centre' was an ideal setting and accommodated for all needs. Thank you to Kim for her great hospitality.

The request for further seminars has been expressed again, and dates are currently being organised for a busy 2024 schedule.

Congratulations to everyone for a successful completion.



Participants - Perth Seminar 19. - 22.10.2023

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