Thank you for booking onto the **Tanning Course.**

If you do not hold any Level 2 (or equivalent) beauty Anatomy and Physiology qualifications, please read the Theory manual. Your Pre-Tan instructions are below.

Things to do before your tanning course

- Remember to exfoliate 24 hours before and also no shaving or waxing within 24 hours of the course.
- No oil-based moisturiser or body sprays on your body the day of the course.
- It is ok to wear a bikini, bra and pants/thong or just pants, it's entirely up to you.
- Wear or bring loose clothing and flip flops to put on after your tan.
- Please let us know prior to the course if you are pregnant or asthmatic

Please note: Students work on each other, if there is any reason why you feel you cannot be a recipient of the treatment then you must let us know.

The venue

Dragonfly Nail and Beauty Academy, Vichy House, 264a Monkmoor Road, Shrewsbury, Shropshire, SY2 5ST Please see directions on the next page.

There will be tea, coffee, water and biscuits provided throughout the course. There are shops around where lunch can be bought but you can bring your own if you prefer.

If you require any further information, please do not hesitate to call us on 01743 354800/ 07974 300139.

Kind Regards

Donna

Donna H Law
CEO

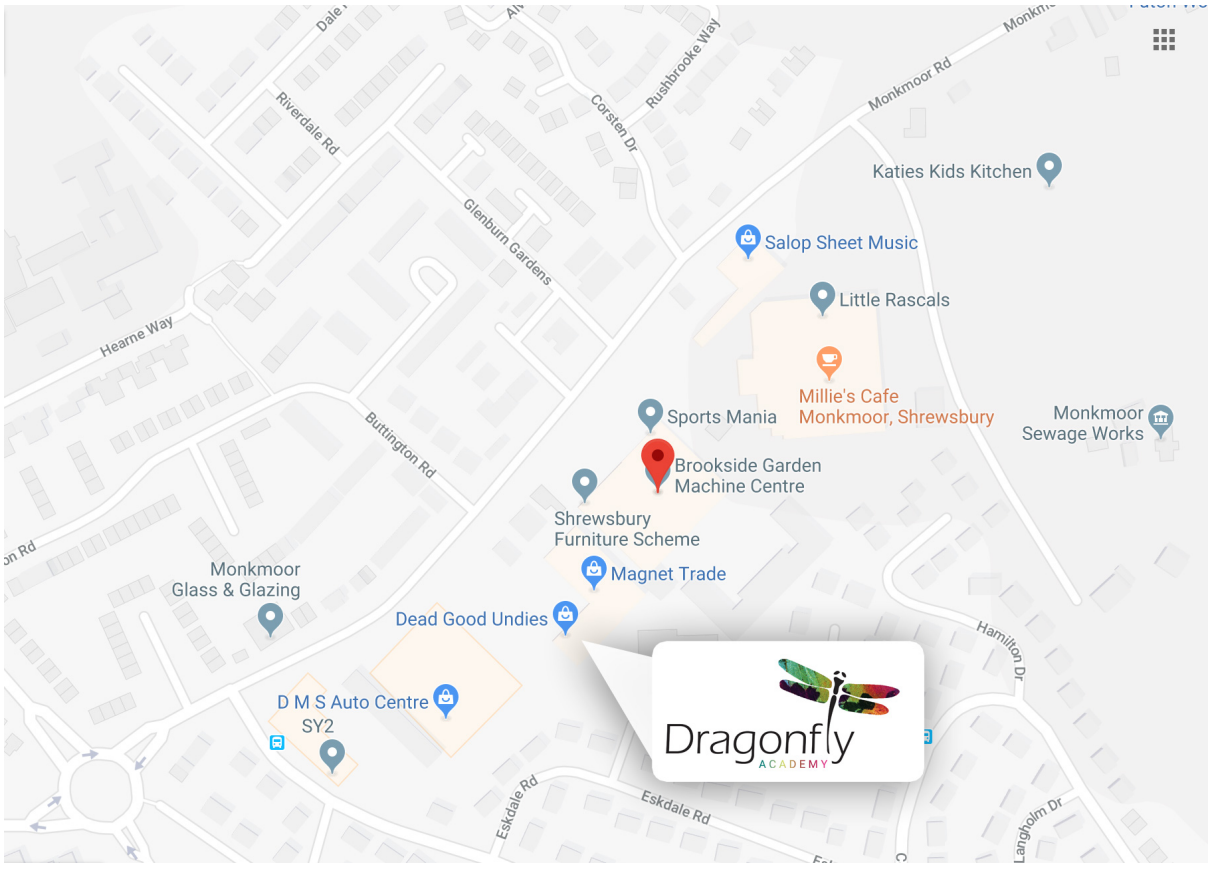
Venue Directions

Dragonfly Nail and Beauty Academy
Vichy House
264a Monkmoor Road
Shrewsbury
Shropshire
SY2 5ST

Satnavs do not find the exact building.

Please follow signs for Magnet Kitchens. Once you are in the car park look for the tall building with green window frames. Parking is free.

Pre-Course Phone Line: 01743 354800
ONLY AVAILABLE 30 MINUTES BEFORE COURSES START
Please call this number if you need help finding us for your course



Anatomy & Physiology
The structure of the skin

(d) The skin is constantly working, regulating other body processes and protecting us from micro-organisms, UV exposure, chemicals and allergens. It needs to be kept in good condition at all time. You need to know the structure and function of the skin to help you understand how to keep your clients skin in good condition.

The skin is divided into two layers:

- The epidermis - top layer
- The dermis - bottom layer.

Underneath the skin is the subcutaneous tissue, which serves to anchor the dermis.

The epidermis

The epidermis is made up of five layers of tissue that contain no blood vessels and very few nerves. Hair follicles and the ducts of sweat and sebaceous glands run through it. The five layers starting from the bottom are called:

- Stratum Germinativum (basal layer): These cells are packed tightly together and are constantly being reproduced. They form the deepest layer of the epidermal layer that rests on top of the dermis.
- Stratum Spinosum (spiky layer): This layer is composed of several layers of cells that vary in size and shape. It is more commonly known as the prickle cell layer as it is linked by very fine threads which give it a spiky appearance.
- Stratum Granulosum (granular layer): As these cells get nearer the surface they flatten and become larger. It has between one and four layers.
- Stratum Lucidum (clear layer): This layer has no nuclei and is transparent with very little outline. These cells are at the end of their life cycle and are becoming dehydrated.
- Stratum Corneum (horny layer): This is the outermost layer of the skin and is composed of several layers of flattened cells. This layer is composed almost entirely of keratin. This layer protects the skin and prevents dehydration of the skins tissues. it takes around 3-4 weeks for cells to reach this level from the stratum germinativum.

The dermis

The dermis lies immediately beneath the epidermis and contains blood vessels, lymph vessels, nerves, sweat and sebaceous glands, hair follicles, arrector pili muscles and papillae. The dermis itself is comprised of two separate layers:

- Papillary Layer
- Reticular Layer.

The papillary layer lies under the epidermis and contains small cone like projections that extend up and into the epidermis called papillae. Papillae contain small blood vessels or nerve endings.

The reticular layer is the lower area of the dermis. It has a dense network of collagen fibres, which run parallel to the surface and give the skin its elasticity. It contains blood and lymph vessels, sweat and sebaceous glands, hair follicles and arrectar pili muscles.

The subcutaneous tissue

The subcutaneous layer is mode up of fatty tissue, commonly described as adipose tissue. This layer anchors the skin and acts as a protective cushion for the body. It also stores fat to be burned for energy. It varies in thickness according to age, health and sex of the body.

It contains the following:

- Blood Supply: A network of arteries that branch into smaller capillary networks around hair follicles, sebaceous and sweat glands .The capillary network is responsible for transporting oxygen and food to the living cells.The amount of blood flow is controlled by the nerve endings in the capillary walls.
- Lymph: Drains away tissue fluid containing waste products from cell activity and foreign bodies such as bacteria.

Nerves

A nerve sends a message from an organ to the central nervous system.There are two types of nerves within the skin structure called 'motor' nerves and 'sensory' nerves. Four sensations can be experienced through the skin and these are:

- Pressure
- Touch
- Pain
- Temperature.

All sensations are due to the network of sensory nerves and receptors within the skin. Those that register pain can be found in the lower epidermis. If for instance your skin is cold, the brain instructs the arrector pili muscle to contract and trap air next to the body for warmth, we call this action "goose bumps".

The functions of the skin

The skin is the largest organ of the body and covers an area of up to 1.3 - 2 sq metres depending on the size of the person. It has a number of jobs to perform to help keep the body in good order. There are six important functions to the skins daily routine:

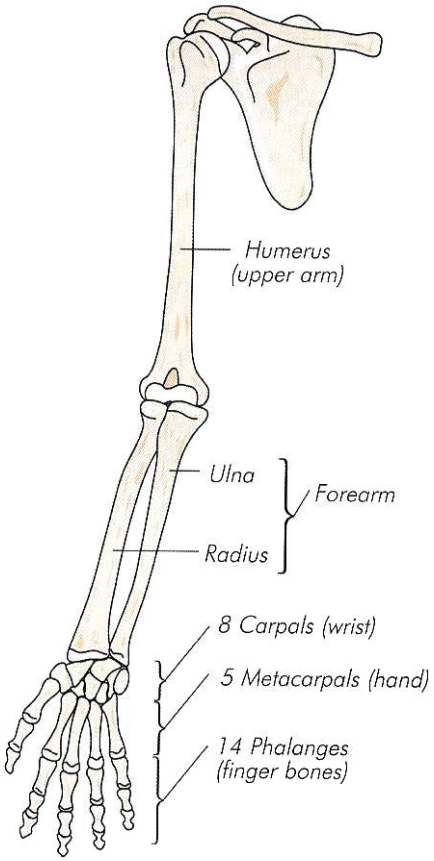
- **S**ensation - a response to pain, pressure and temperature
- **H**eat regulation - a response to hot or cold
- **A**bsorption - limited absorption of certain chemicals
- **P**rotection - it protects us from injury and is waterproof and antibacterial
- **E**xcretion - this is perspiration through sweat glands
- **S**ecretion - sebum is secreted from sebaceous glands.

You will see that the initials of each word spells "SHAPES" This is a good way to remember functions. It is part of our work as a manicurist/pedicurist to educate our clients on how they can maintain healthy skin on their hands and feet so it is important for you to know the structure.

Hand and lower arm

(a) and (b) The Skeletal System

The skeletal system is the frame that supports our body and our bones are living growing structures. You need to have some knowledge of the skeletal system as you may come across conditions that contra indicate a treatment, or conditions where a good manicure or pedicure routine would prove to be effective.



(a) Bones of the hand and arm

Humerus: the long bone which extends from the shoulder joint down to the elbow.

Ulna: slightly larger than the radius and runs down the arm from the elbow on the side where the little finger is situated,

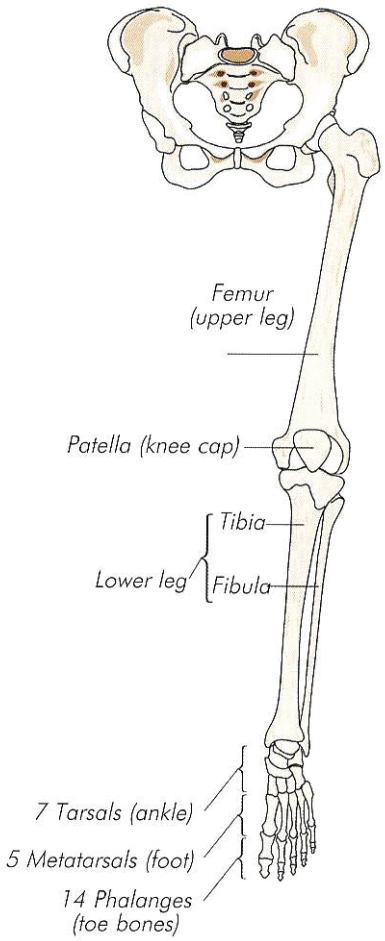
Radius: The radius runs down the arm from the elbow on the side where the thumb is situated. The ulna and radius form a joint at the elbow and at the other end a series of joints that connect with the bones of the wrist.

Carpals: Are a group of eight bones that form the wrist. The bones are arranged in two rows of four. The lower four form a joint with the bones of the palm.

Metacarpals: Are the bones in the palm of the hand. There are five long bones one relating to each finger.

Phalanges: Are the small bones that make up the fingers. There are three in each finger and two in the thumb making a total of 14.

(b) Bones of the foot and leg



Femur: This is the long bone running down from the thigh it extends from the hip to the knee.

Tibia: Is a long strong bone situated towards the middle of the leg and its function is to support body weight as well as being used for muscle attachment. It forms a joint with the ankle.

Fibula: Is a long slim bone towards the outer side of the leg. Its main function is for muscle attachment and extends from the knee down to the ankle.

Patella: Is a flat bone situated at the knee joint and is commonly known as the kneecap it is embedded in tendon and does not form a joint to any other bones.

Tarsals: These are seven bones that make up the ankle and are slightly larger than the carples in the wrist

Metatarsals: These are five long bones that make up the length of the foot. They connect the ankle and the bones of the toes.

Phalanges: These are the 14 bones that make up our toes. There are three in each toe except for the big toe, which has two. It is common for the bones in the little toe to fuse together

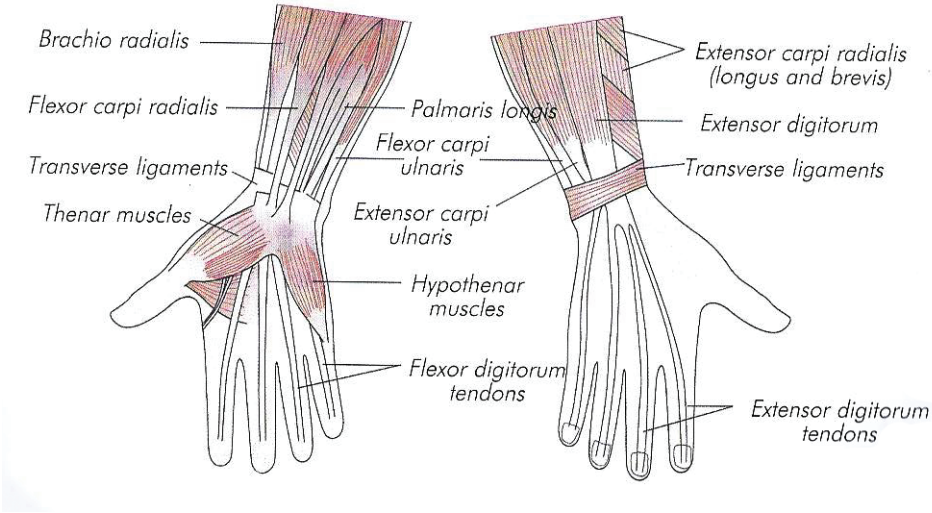
(a) and (b) The muscular system

It is impossible for the body to move without the contraction of muscles. The muscular system has four main characteristics:

- The ability to shorten (or contract)
- The ability to stretch when relaxed
- The ability to return to its original shape (elasticity)
- The ability to respond to the nervous system.

Muscular movements aid the flow of blood through the veins and a liquid called lynth through the lymphatic system. It is important for us to hove some knowledge of the muscular system to be able to perform effective treatments. You will be performing massage on the different muscle groups in the arms/legs and this can help certain conditions that your client may be suffering from. You work on skeletal muscle groups in manicure/pedicure treatments.

(a) The muscles of the hand



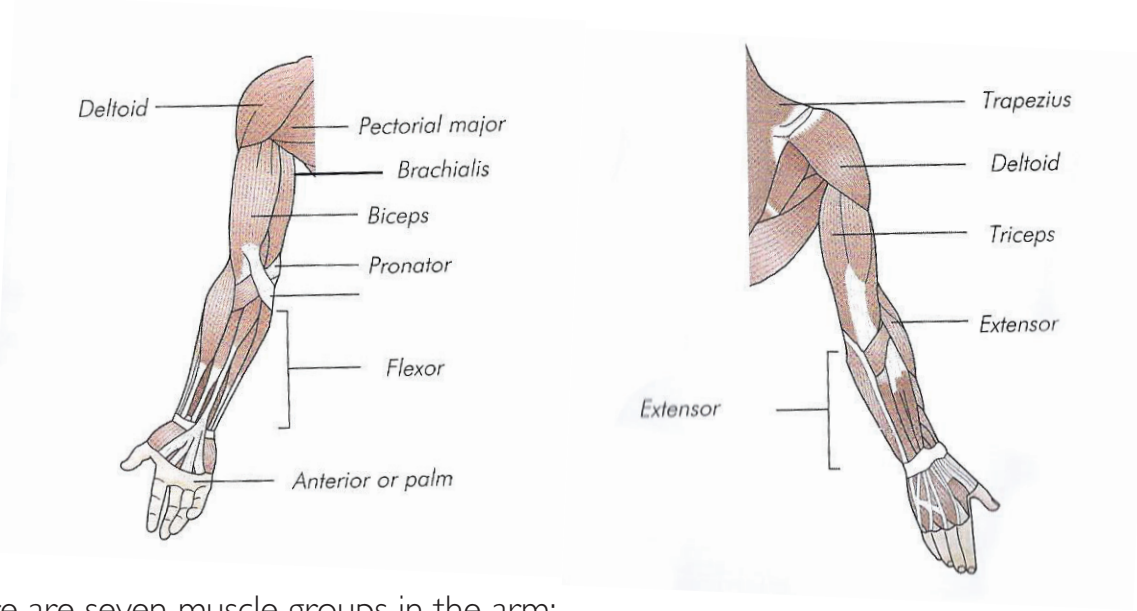
There are three main muscle groups in the hand:

Hypothenar muscle: Is positioned in the palm of the hand and is attached to the carpals, metacarpals and the phalanges of the little finger.

Thenar muscle: This muscle is also positioned in the palm of the hand but attaches to the thumb, metacarpals and the carpals.

Mid Palm Group: These muscles are in the centre of the palm below the middle three fingers. They are attached to the carpals, metacarpals and phalanges of the middle three fingers.

(a) The muscles of the arm



There are seven muscle groups in the arm:

Biceps: Are found in the upper arm above the elbow and is attached to the scapula of one end and the radius at the other

Brachialis: This muscle is found attached to the humerus and ulna across the elbow

Triceps: Is found at the back of the upper arm and attached to the scapula and humerus at one end and the ulna at the other

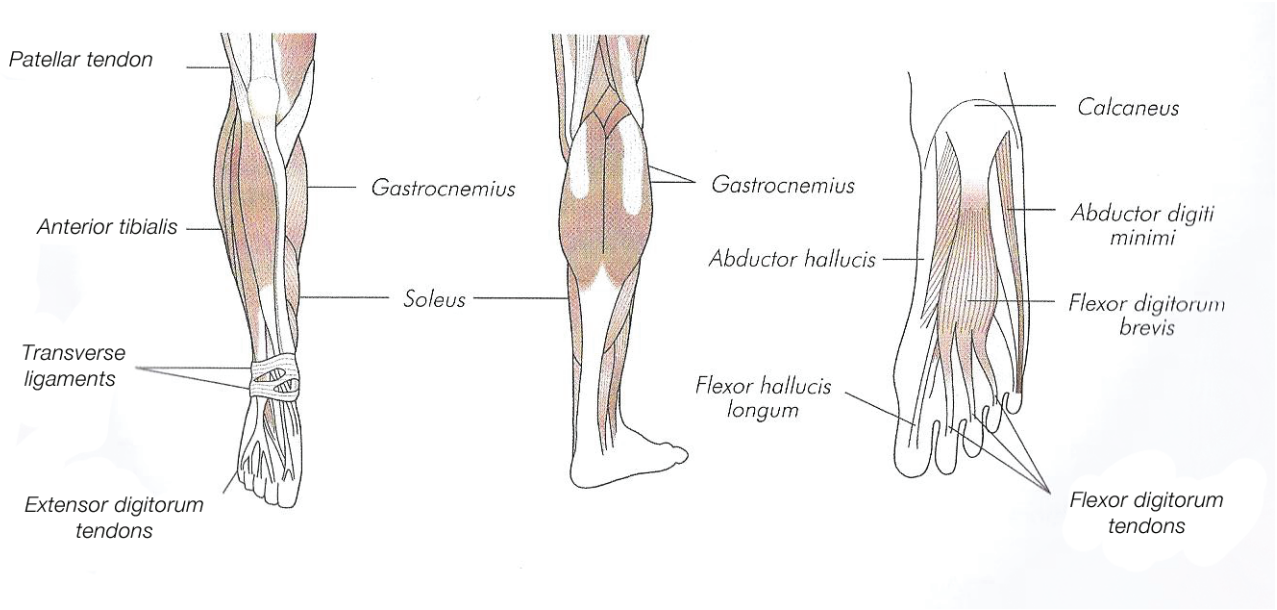
Supinator: Is found at the lateral aspect of the lower humerus and radius

Flexors: Are found at the medial aspect of the forearm and are attached to the lower humerus, radius and ulna at one end and the metacarpals and phalanges at the other.

Pronators: Are found at the medial aspect of the lower humerus and radius.

Extensors: Are found at the lateral aspect of the forearm and are attached to the lower humerus, radius and ulna at one end and the metacarpals and phalanges at the other.

(b) The muscles of the lower leg and foot



The lower leg and foot have seven muscle groups:

Gastrocnemius: Is in the posterior aspect of the lower leg and is the main calf muscle. It is attached to the lower part of the femur at the back of the knee and to the ankle.

Soleus: Is under the gastrocnemius in the calf and is attached to the fibula and tibia at one end and across the ankle to the calcanuem.

Tibialis anterior: Is along the skin at the anterior of the lower leg and is attached to the tibia at one end and the cuneiform and first metatarsal at the other.

Tibialis posterior: Is found at the back of the calf and is attached to the tibia and fibula at one end and the navicular bone at the other.

Peroneus: Is a group of three muscles found at the back of the lower leg and is attached to the fibula and across the ankle to the underneath of the first and fifth metatarsals.

Flexors of the toes: Are deep in the back of the lower leg and are attached to the tibia and fibula at one end and the phalanges other.

Extensors of the toes: Are in the anterior and lateral aspects of the lower leg attached to the tibia and fibula and the phalanges of the toes.