

# INTRODUCTION

Animal acupuncture is based on Traditional Chinese Medicine (TCM). This ancient healing art is composed of a series of theories that guide the practitioner toward assessing and specifically selecting the acupoints that will most effectively resolve the pattern of disharmony that a particular animal is experiencing.

In Eastern Pathology, the assessment process is key to an effective acupuncture session. The TCM theories identified in the Assessment portion of the National Certification Examination for Animal Acupuncture (NCEAA) include: *Zang-Fu* (Internal Organ) Theory, Meridian Theory, The Five-Phases of Transformation (also called the Five-Element Theory), *Chi* and Blood Theory, and *Yin –Yang* Theory. TCM practitioners need to have a working knowledge and demonstrate sufficient understanding of the TCM assessment tools such as: The Four Examinations and the Eight Principles.

Additionally, practitioners need to have an understanding of how the body functions from the TCM perspective. Practitioners must know how *Chi*, also seen as *Qi* or *Ki*, as life-promoting energy in its many vital forms functions within the animal body. Knowing how the Six Exogenous Pathogens are exhibited is important as well.

Successful assessment requires the integration of these ancient eastern theories, assessment tools, and a host of basic TCM concepts. By integrating this body of knowledge, the practitioner is able to review the current complaint, decipher the indicators to identify the pattern of disharmony (syndrome) the animal is exhibiting, and then arrive at an appropriate basis for acupoint selection for an acupuncture session.

There are over 150 different methods of assessment in Chinese Medicine. We do not expect the acupuncturist to have mastered more than just the basic assessment tools and be able to integrate the significant theories and concepts to discern patterns, or syndromes.

Additionally, there will be variations from text to text and school to school with regard to terms, phraseology, references, etc. In most cases, acupuncture practitioners should have enough familiarity with the subject matter and exposure to a variety of TCM texts to be able to discern the intended meaning. An example of this some texts and schools refer to *San Jiao* others use the English term “Triple Heater,” while others use “Triple Burner.” Another example is, *Yuan Chi*, in English it is translated in many ways: Source Chi, Original Chi, Pre-Natal Chi, Heavenly Chi, etc. We must assume that someone working in this field is knowledgeable enough to understand these variations.

# BASIC TRADITIONAL CHINESE MEDICINE THEORIES

Traditional Chinese Medicine is composed of a series of theories and concepts that distinguish ancient Chinese philosophy and medicine from all others. The following section of this Study Guide Annotated Outline provides a brief summary of the theories essential in the application of acupressure with animals.

## ***Chi and Yin-Yang Theory***

*Chi*, also seen as *Qi* or *Ki*, functions in the body to:

- Promote
- Warm
- Defend
- Control
- Activity (*Chi Hua*)

*Yin* and *Yang* are the two major aspect of *Chi*. *Yin* and *Yang* are:

- Opposites
- Related
- Interdependent
- Infinitely Divisible
- Transform into each other

*Chi* flows throughout the body on a 24-hour cycle where each organ system receives its optimal flow of *Chi* for two hours. This is known as circadian rhythm or the 24-hour body clock. Offering an acupressure session during the organ systems optimal flow can enhance the effectiveness of the session. If an animal was consistently exhibiting a particular indicator during a 2-hour time flow, look to that meridian or organ system for a possible imbalance.

In *Yin-Yang Theory*, *Yang* is associated with attributes of fire and *Yin* is associated with attributes of water. Fire and water reflect the nature of *Yin* and *Yang*. *Yin* and *Yang* are used to identify patterns of disharmony:

- Excess Patterns – Excess *Yang*/ Heat & Excess *Yin*/Cold
- Deficient Patterns – Deficient *Yang* / False Cold & Deficient *Yin* / False Heat

Acupressure session principle and selection of acupoints is based on identifying or discerning the pattern or syndrome. For:

- Excess patterns – sedate or disperse the excess
- Deficient patterns – tonify or strengthen the deficiency

Indicators for:

- Excess *Yang* can include: dehydration, fever
- Excess *Yin* can include: low temperature, hypo-activity
- Deficient *Yang* can include: poor digestion, lethargy
- Deficient *Yin* can include: loss of blood, emaciation

Some schools and texts identify only three Vital Substances, others say there are four, and others list five, even six. The following is a general list of Vital Substances that animal acupressure practitioners need to be aware of and how they function within the body:

- *Chi (Qi)*
- *Shen* (Spirit)
- *Jing* (Essence)
- Xue (Blood)
- Jinye or Jingye (Body Fluids)

There are many different types of Chi that function within the animal's body. Knowing where these forms of Chi are stored and how they function allows the practitioner to fully address the animal's condition. For instance, if an animal were experiencing muscle atrophy, the practitioner could address the issue of balancing the organ systems related to Nutrient Chi. A few types of Chi are:

- Source Chi / *Yuan Chi*
- Nutrient Chi / *Ying Chi*
- Defensive Chi / *Wei Chi*
- Chest Chi / *Zong Chi*
- Immune System Chi / *Zhong Chi*

## **Meridian and Zang-Fu Theory**

Meridians, or channels, are pathways that course throughout the animal's body to circulate Chi (vital energy), Blood (nutrient rich substances), and other vital substances to all parts of the body. Meridians, like roadways on a map, flow along specific pathways. For instance, the Lung Meridian begins on the chest and courses down the medial side of the forelimb. The Bladder Meridian begins on the inner canthus of the eye and travels adjacent to the dorsal midline of the back and down the lateral side of the hind limb. The acupressure practitioner must know the location and be able to trace all 12 of the Major Meridians.

Meridians have an internal-external relationship with organs for which they are named. There are 12 Major Meridians, though some texts refer to only 11 internal or Zang-Fu organs. Some schools and texts do not include the Pericardium (the sac protecting the heart) as an organ, yet the meridian is as important as the other meridians since it is protecting the Heart. There are six Yang meridians, which are paired with six Yin meridians.

- Yin Meridians – Lung, Pericardium, Heart, Spleen, Liver, Kidney
- Yang Meridians – Stomach, Small & Large Intestines, Gall Bladder, Bladder, Triple Heater

The internal organs, or *Zang-Fu* organs, (*Zang* means Yin and *Fu* means Yang), have specific functions that they must perform to keep the body balanced and functioning properly. The following provides a partial list of functions, the sense organ related to the organ, when it is receiving its optimal Chi flow, the fluid associated with it, the emotion attributed to it, the element in which it is classified, etc. Below is a digest of the roles

each organ system performs.

### **Lung**

- Governs Chi and respiration
- Controls the channels and blood vessels
- Controls the dispersing, descending *Zong* chest Chi
- Circulates Chi – *Wei* or Defensive Chi
- Regulates the water passages
- Controls skin / body hair
- Fluid is Mucus
- Opens into the nose
- Related emotion is grief, prolonged sorrow
- Metal Element – Yin
- Chi flow - 3am – 5am

### **Large Intestine**

- Receives food and water from the Small Intestine
- Re-absorbs fluid & excretes feces
- Controls the skin
- Balances Chi and Blood
- Opens into the nose
- Metal Element – Yang
- Chi Flow - 5am-7am

### **Stomach**

- Controls digestion of food
- Controls transportation of food essences
- Controls the descending of Chi
- Originator of fluids
- Earth Element – Yang
- Chi Flow - 7am-9am

### **Spleen**

- Governs transportation and transformation of liquid and solids of digestion to create Nutrient/*Ying* Chi
- Controls the blood within vessels
- Controls the muscles and four limbs
- Originator of Blood
- Opens into the mouth
- Fluid is Saliva
- Relates to thought or over thinking (worry)
- Earth Element – Yin
- Chi Flow - 9am-11am

### **Heart**

- Governs the blood
- Controls the blood vessels

- Houses the mind / Shen (spirit/attitude)
- Regulates heat by controlling sweating & panting
- Regulates nervous system
- Related emotion is joy
- Fluid is Sweat
- Opens into the tongue
- Fire Element – Yin
- Chi Flow - 11am – 1pm

### **Small Intestine**

- Controls receiving and transforming
- Separates turbid from clear fluids
- Related to discernment
- Regulates functions of the intestines
- Regulates body fluids
- Fire Element – Yang
- Chi Flow - 1pm-3pm

### **Bladder**

- Stores and excretes urine
- Removes water by Chi transformation
- Water Element – Yang
- Chi Flow - 3pm-5pm

### **Kidney**

- Stores Essence and governs birth, growth, reproduction and development
- Produces marrow, fills up the brain and controls bones (teeth)
- Dominates water metabolism
- Controls the reception of Chi
- Grasps Chi from the lungs
- Opens into the ears
- Manifests in the hair
- Controls the lower two orifices
- Houses Will Power
- Related emotion is fear
- Fluid is internal Spittle, Joint Fluid
- Water Element – Yin
- Chi Flow - 5pm-7pm

### **Pericardium**

- Protects the Heart from exterior pathogenic factors and emotional stress
- Assists the Heart in governing blood
- Related emotion is trust
- Fire Element – Yin
- Chi Flow 7pm-9pm

**Triple Heater**

- Directs Source Chi to the organs and Source Points
- Coordinates the three compartments
- Responsible for thermal regulation
- Regulates water passage
- Fire Element – Yang
- Chi Flow 9pm-11pm

**Gall Bladder**

- Stores and excretes bile
- Controls judgment
- Controls the sinews / soft tissue
- Wood Element – Yang
- Chi Flow - 11pm – 1am

**Liver**

- Stores/distributes blood
- Detoxifies blood
- Regulates emotions
- Related emotion is anger
- Ensures harmonious, smooth flow of Chi
- Controls the sinews, tendons, ligaments
- Fluid is Tears
- Manifests in the nails / hooves
- Opens into the eyes
- Wood Element – Yin
- Chi Flow - 1am – 3am

The Conception and Governing Vessels, two of the eight extraordinary meridians, are not associated with a particular organ system, but the acupoints along these vessels are consistently used with the acupoints of the 12 Major Meridians. Below are the functions of these two vessels.

**Conception Vessel**

- Creates balance among the 12 Major Meridians
- Unites the 12 Major Meridians encouraging Chi flow to adjust when blockages exist
- Governs reproductive cycle and fetus development
- Regulates blood flow among the 12 Major Meridians
- Regulates the peripheral nervous system

**Governing Vessel**

- Strengthens Yang Chi
- Balances Chi among the 12 Major Meridians
- Governs the nervous system
- Regulates blood flow among the 12 Major Meridians

By having a firm command of the Zang-Fu organ functions, the practitioner will be able

to discern both patterns of harmony and disharmony related to each organ system. For instance, if an animal were exhibiting a dry coat, had recently lost his mate and appeared to be grieving the loss, and his breathing seemed shallow, the practitioner would look to the Lung for a possible imbalance. Another example: a dog presents with chipped and broken nails, yellow discharge from his eyes and his behavior is erratic and volatile, the practitioner would check to see if the Liver was balanced.

### **Acupoint Classifications**

Acupoint Classifications are often referred to as the Chinese Medicine Bag because they are the “tools” of the practitioner. Acupoints have known energetic benefits and are used accordingly. Acupoints with common energetic attributes have been grouped into specific classifications so that a practitioner can quickly select a point to help address a particular issue. The classification identified as Master Points offer the practitioner acupoints that enhance the effect of a session that is concerned with a particular anatomical region of the body, such as the hindquarter. The most common Acupoint Classification that all practitioners would do well to have at their finger tips are:

- Association / Back *Shu* Points
- Alarm / Front *Mu* Points
- Source / *Yuan* Points
- Master Points
- Influential Points
- Ting/*Jing*-Well Points
- Connecting/ *Luo* Points

### **Five Phases of Transformation, also known as The Five-Element Theory**

The Five Phases of Transformation depicts a highly organic model of balance within animal/human life and the natural world. The ancient Chinese created this highly sophisticated conceptual model to serve as both a philosophical construct and a method of sorting complex information for the purpose of discerning patterns and selecting acupoints for an effective acupuncture/acupressure session.

The Chinese looked at the natural environment and recognized that we are all part of the environment. They wanted to understand how animals and humans were able to cope with and find a healthful balance within the environment. They selected five metaphors to represent five patterns of energy:

- Wood
- Fire
- Earth
- Metal
- Water

To establish balance, the Ancient Chinese recognized that there had to be both a Creation Cycle (*Sheng* Cycle) and a Control Cycle (*Ko* Cycle). Growth cannot get out of hand; there must be control or there can be no balance. The health of the environment and, in its smaller form, the health of the living body is dependent on this balance. It is a system that is continuously reflected at the macro and micro levels.

- The Creation Cycle: Wood fuels Fire; Fire creates Earth; Earth compresses to Metal; Metal creates Water; and Water feeds Wood.
- The Control Cycle: Wood controls Earth; Earth controls Water; Water controls Fire; Fire controls Metal; and Metal controls Wood.

The Five Phases of Transformation describes a dynamic balancing process. For an acupuncture practitioner to use this theory effectively, he/she must learn the correspondences associated with each of the phases. There are many texts that focus on a single phase of transformation going to the nth-degree of possible corresponding associations. What you need to grasp is a “sense-perception” of each of the “elements” delineated in the Five Phases. To begin to comprehend the metaphoric or symbolic system that describes different energies, such as a Wood or Fire Pattern, you can begin with the correspondences:

- The Life-Cycle Phase of Transformation such as birth is associated with the Wood Phase and growth is associated with the Fire Phase;
- The Season of the year – Wood corresponds to Spring while Fire is associated with Summer;
- The nature of the Climate – Wood is associated with wind, Fire corresponds with hot;
- The Emotion associated with Wood is anger and Fire is joy;
- The Sensory Organ – Wood is connected to the Eyes and Fire to the tongue;
- A Governed part of the Body – Wood is related to the tendons and ligaments, Fire is related to the vascular system; and,
- The corresponding Meridians for each of the Phases are important in being able to discern the pattern of disharmony and know how to restore balance. There are many texts available that provide correspondence charts concerning the Five Phases of Transformation.

The Five Phases of Transformation describes the relationships between the organ systems and how to maintain a harmonious flow of Chi, Blood and other vital substances. It is used as an assessment tool and many point selection techniques have been devised based on this concept of balancing the energies of the body.

## **SAMPLE QUESTIONS**

1. The fluid of the Lung is:
  - a. Water
  - b. Body Fluids
  - c. Tears
  - d. Mucous
2. The Spleen does all of the following except:
  - a. Dominates the 4 limbs
  - b. Opens to the mouth
  - c. Produces bile
  - d. Transforms dampness



3. All of the following properties belong to Yang except:
  - a. Nourishes
  - b. Warms
  - c. Promotes
  - d. Goes up
  
4. The Gall Bladder helps the Heart in governing the blood.
  - a. True
  - b. False
  
5. The Gall Bladder and Liver's most identical function is:
  - a. Storing Blood
  - b. Controlling the sinews
  - c. Replenishing the Blood
  - d. Governing Chi and Blood

Answer Key: 1.d, 2.c, 3.a, 4.b, 5.b

# ASSESSMENT TOOLS

## The Four Examinations

The Four Examinations to Differentiate Patterns:

- Observation
- Listening / Smelling
- Questions / Inquiry
- Physical Palpation

The Chinese used all of their keenly honed senses and applied them utilizing the structure of the Four Examinations to ascertain the animal's condition.

- Observation – visual assessment of coat, excretions, general attitude, discharges, etc.
- Listening / Smelling – listening for respiratory issues, vocalization and smelling for heat conditions.
- Questions / Inquiry – asking about lifestyle, preferences, health history, current complaint
- Physical Palpation – General condition, muscle tone, hot and cold areas, injuries, scars, external manifestations, etc.

The Four Examinations under the heading of Observation often use a Vitality “rating” to Differentiate Patterns:

- Full Vitality – Youthful, energetic, and no injury to Chi. If illness occurs, full recovery is expected.
- Lack of Vitality – Insufficient Essence and Chi of the Yin Organs leading to deficiency patterns. Illness may not lead to full recovery.
- Loss of Vitality – Decline of vitality due to damaged Chi leading to critical condition and unfavorable outcome.
- False Vitality – Flicker of life before death.

Indicators of Observation of Vitality “rating” for Differentiation of Patterns:

- Full Vitality – Manifestation of normal Essence and Chi, agile clear minded, good breathing, alert, eyes shining.
- Lack of Vitality – Less lustrous eyes, coat, over all condition, listlessness, shortness of breath.
- Loss of Vitality - Serious damage to Chi, sluggish, indifference, dull eyes, feeble and intermittent breath, reflecting Zang-Fu Organ (internal organs) decline.
- False Vitality – Temporary spark of life, serious disease pattern leading to death.

## Association and Alarm Points

Association Points, or Back *Shu* Points, are located along the medial spine or branch of the Bladder Meridian. They are an acupoint classification that has a direct internal-external relationship and energetic connection with the organ for which it is named:

- Bladder 13 is connected to the Lung
- Bladder 14 is connected to the Pericardium

- Bladder 15 is connected to the Heart
- Bladder 18 is connect to the Liver
- Bladder 19 is connected to Gall Bladder
- Bladder 20 is connected to Spleen
- Bladder 21 is connected to Stomach
- Bladder 22 is connected to Triple Heater
- Bladder 23 is connected to Kidney
- Bladder 25 is connected to Large Intestine
- Bladder 27 is connected to Small Intestine
- Bladder 28 is connected to Bladder

Association Points, or Back *Shu* Points are used both for assessment and therapeutically because they have a direct relationship and energetic connection with the Zang-Fu (internal) organs.

Alarm Points, or Front Mu Points, are located on the ventral aspect of the animal's body. When used for assessment, this category of points has the energetic characteristic of indicating if an imbalance has gone beyond the meridian level and is affecting the organ system itself. The Alarm Points are related to the 12 Zang-Fu organs:

- Lung 1 is related to Lung
- Stomach 25 is related to Large Intestine
- Conception Vessel 12 is related to Stomach
- Liver 13 is related to Spleen
- Conception Vessel 14 is related to Heart
- Conception Vessel 4 is related to Small Intestine
- Conception Vessel 3 is related to Bladder
- Gall Bladder 25 is related to Kidney
- Conception Vessel 17 is related to Pericardium
- Conception Vessel 5 is related to Triple Heater
- Gall Bladder 24 is related to Gall Bladder
- Liver 14 is related to Liver

### **The Eight Principles**

The 8 Principles are used to sort the indicators of a particular pattern of disharmony in order to discern Patterns. This sorting tool helps to identify if the nature of the condition the animal is exhibiting is:

- Exterior or Interior
- Hot or Cold
- Excessive or Deficient
- Yang or Yin

### **The Six Exogenous Pathogenic Factors**

Understanding the nature of the Six Exogenous Pathogenic Factors helps to discern patterns of disharmony. These Exogenous Factors can only invade the animal's body if the animal's Chi is weak. The Six Factors include:

- Wind

- Cold
- Heat / Fire
- Damp
- Dry
- Summer Heat

## **Tongue and Pulse Assessment**

Tongue assessment is very complex and takes years of study. For the purposes of NCEAA, we will only ask the most basic information regarding Tongue Assessment which includes:

- Red Tongue indicates a heat pattern
- Pale Tongue indicates a cold pattern
- Dark Red Indicates extreme heat pattern
- Purple indicates a stagnation of Blood

Distinguishing patterns using the Pulse Assessment requires in-depth study. For general purposes it is important to know:

- Moderately strong and moving smoothly is normal
- Rapid pulse indicates a heat pattern
- Slow pulse indicates cold condition

Yin-Yang Theory, Zang-Fu Organ Theory, and Meridian Theory are essential components to discerning patterns. The entire assessment process is dependent on extensive knowledge and understanding of how the organs systems and vital substances function within the body. These concepts are covered in the Basic Traditional Chinese Medicine segment of this Study Guide Outline.

## **SAMPLE QUESTIONS**

1. The animal's ear exhibits an oily discharge. Which organ system may need to be further assessed?
  - a. Kidney
  - b. Spleen
  - c. Lung
  - d. Heart
2. The animal is unable to keep weight on. Which organ system could be used to help this animal?
  - a. Heart
  - b. Spleen
  - c. Lung
  - d. Kidney
3. Bl 23 can be used to tonify the Kidneys?
  - a. True
  - b. False

4. The acupoint most commonly used for various blood conditions is:

- a. Ht 7
- b. Sp 3
- c. Bl 17

5. Which point is located 2 cun lateral to the umbilicus?

- a. Ht 3
- b. Sp 9
- c. St 25
- d. Bl 1

Answer Key: 1.a, 2.b, 3.a, 4.c, 5.c

## **Energetics & Location of Major Acupressure Points**

The scope of this section of the exam covers the physical location of major acupoints, their primary energetics and the location of these acupoints.

### **Locating Acupoints**

- Cun Measurements
- Landmarks
- Fixed, proportional and moving points

### **Acupressure Points**

- Association Points  
    Location & Energetics
- Alarm Points  
    Location & Energetics
- Connecting Points  
    Location & Energetics
- Jing-Well Points  
    Location & Energetics
- Influential Points  
    Location & Energetics
- Master Points  
    Location & Energetics

## Acupressure Technique, Practice and Ethics

Acupressure Techniques can vary significantly from school to school and instructor to instructor. There are some basic commonalities that we can assume including:

- Selecting a location that is safe and where there is little distraction for both practitioner and animal;
- Introducing yourself to the animal;
- Centering your energy and healing intent;
- Knowing the “language” or signals of the animal;
- Understanding how long to hold an acupoint;
- Familiarity with how animals indicate releases of energy;
- Awareness aware of how to effectively use the 24-hour circadian rhythm / 24-hour Directional Flow of Chi;
- Placing both hands on the animal during a session;
- Knowing when not to offer an acupressure session;
- Knowing the acupoints that are contraindicated during pregnancy;
- Understanding that fewer acupoints are to be used in a session when an animal is weak or sick;
- Understanding that you should not work with an animal that is exhibiting undiagnosed pain of any type;
- Knowing not to work with an animal that has experienced a sudden change in behavior
- Recognizing that acupressure sessions are animal-centered.

Chi circulates completely throughout the body in a 24-hour period. Each organ system receives its optimal flow of Chi for 2-hours as the Chi circulates. Knowing the flow of Chi is important in both assessment and resolution of conditions. This is known by a number of names: The 24-Hour Body Clock, Circadian Rhythm; Directional Flow of Chi, etc. The flow of Chi is as follows:

- Lung – 3 – 5 am
- Large Intestine – 5-7 am
- Stomach – 7- 9 am
- Spleen – 9-11 am
- Heart – 11 am – 1 pm
- Small Intestine – 1 – 3 pm
- Bladder – 3 – 5 pm
- Kidney – 5 – 7 pm
- Pericardium – 7 – 9 pm
- Triple Heater – 9 – 11 pm
- Gall Bladder – 11 pm – 1 am
- Liver – 1 – 3 am

First Aid is an essential tool for the acupressure practitioner. Being able to support life in an emergency situation is critical to the overall knowledge of health care. There are many equine and small animal first aid courses that cover life-threatening issues, such as:

- Resuscitation

- Loss of consciousness
- Immediate wound/injury care
- Sprains
- Sudden lameness
- Broken bones
- Eyes tearing heavily
- Poisoning
- Etc.

A Scope of Service defines the actual practice parameters expected of a practitioner. Knowing the acupressure practitioner Scope of Service is critical because we need to be aware of exactly where the practitioner's role begins and ends within the spectrum of the animal healthcare professions. Not being aware of the animal acupressure practitioner's Scope of Service can lead to endangerment of the animal and public, plus, lead to legal liability issues. The scope of Service covers the areas of:

- Knowledge and skills necessary to perform the tasks of an acupressure practitioner competently;
- Safety issues;
- Hygiene;
- Knowledge of animal behavior;
- Ability to manage a practice and maintaining records using common business practices;
- Clarity regarding when to refer to other healthcare professionals;
- Etc.

A Code of Ethics is a document that refers to an individual's or group's values, beliefs, standards, and expectations that need to be reflected in practitioner behavior. Ethical behavior pertains to acceptable and unacceptable actions. The practitioner needs to have a clear sense of right and wrong behavior and act within those boundaries as well as be aware of the legal ramifications of actions. This can include but is not limited to:

- Acting respectfully toward animal and human clients and fellow professionals;
- Only performing techniques for which the practitioner is deemed competent;
- Offering recommendations within the practitioner's Scope of Practice;
- Maintaining client confidentiality;
- Setting business practices and communicating them to clients.
- Please refer to the NBCAAM Code of Ethics available on the website:  
[www.NBCAAM.org](http://www.NBCAAM.org) for the specific Code of Ethics for Animal Massage and Acupressure Practitioners.

## **SAMPLE QUESTIONS**

1. Acupoints that are not known acupoints, yet the animal indicates a pain reaction are called:
  - a. Local
  - b. Ashi
  - c. Rostral



- d. Calming
2. A general definition of 'ethics' involves a system of moral principles governing:
    - a. Liability
    - b. Hazardous waste
    - c. Standards of behavior
    - d. Standards of Practice
  3. The most effective session with an animal client is when the time spent is:
    - a. Client-centered
    - b. Practitioner-centered
    - c. Owner-centered
    - d. None of the above
  4. In regard to digestive issues, the best time to offer an acupressure session would be:
    - a. 8 – 10 pm
    - b. 7 – 9 am
    - c. 9 – 11 pm
    - d. 3 – 5 am
  5. There are no contra-indications for an acupressure session.
    - a. True
    - b. False

Answer Key: 1.b, 2.c, 3.a, 4.b, 5.b

# Pathology

Pathology is the study of disease. The term pathogen comes from the Greek word “pathos” meaning disease. An organism capable of producing disease in an animal is referred to as a pathogen. Pathological is a term used for a diseased condition. An understanding of pathological conditions is necessary in order for a practitioner to be able to make accurate decisions regarding an appropriate acupuncture plan.

Acupuncture is useful in the management of many pathological conditions because it can provide immune support, relieve muscle spasms, relieve stress, and help to diminish pain. A common disorder of many pathological conditions practitioners see is ataxia, which is uncoordinated gait. Dehydration mimics many symptoms similar to many pathological conditions of the muscular system and may show up as ataxia. The greater the understanding of equine pathology the practitioner has, the better informed and intelligent their decisions will be, while staying within their specific scope of practice.

The following outline of equine pathology concepts and specifics provides students with general study direction for sitting for the NBCAAM exam. A list of references is also provided for further study.

## **VITAL SIGNS OF HEALTH**

- Equine Behavior
  - Attitude and Expression
  - Cribbing, weaving, discipline issues
- Equine Intake
  - Food
  - Water
- Body Condition and Weight
  - Condition of Muscles
  - Symmetry
  - Condition of Coat
  - Condition of Hooves

## **CARDIOVASCULAR SYSTEM AND CONDITIONS**

- Normal cardiovascular anatomy and physiology

## **RESPIRATORY SYSTEM AND CONDITIONS**

- Normal functioning and physiology
- Pneumonia
- Heaves / COPD
- Roarer's
- Influenza
- Environmental Factors

## **DIGESTIVE SYSTEM & CONDITIONS**

- Normal functioning and physiology

- Equine Choke
- Gastric Ulceration
- Colitis

### **ORAL CAVITY AND DENTAL HEALTH**

- Environmental Factors & Dental Health
- Anatomy of Mouth and Teeth
- Temporomandibular Joint
- The Jaw
- Indicators of Dental Issues
  - TMJ Tension
  - Conformation
  - Assessment of Chewing
  - Difficult Behavior
  - Prevention of Problems

### **OPHTHALMIC CONDITIONS**

- Normal functioning of the eye
- Cloudy Eye
- Corneal Ulcers & Lesions
- Conjunctivitis
- Uveitis
- Glaucoma

### **ENDOCRINE SYSTEM**

- Hypothyroidism
- Cushing's Syndrome

### **MUSCULOSKELETAL SYSTEM**

- Equine Lameness - Foreleg
  - Sweeney
  - Bucked Shins - Tendinitis
  - Ringbone
  - Sidebone
  - Splints
  - Osselets
  - Bowed Tendons
  - Arthritic Conditions
  - Navicular
  - Bone Fractures
- Equine Lameness - Hind Leg
  - Hip Issues
  - Sacroiliac Luxation
  - Stifled
  - Bog Spavin
  - Spavin
  - Arthritic Conditions

- Bone Fractures

#### **CONDITIONS OF THE HOOF**

- Thrush
- Cracks
- Seedy-Toe
- White Line Syndrome
- Bruised Sole
- Sidebones
- Laminitis
- Subsolar Abscess
- Contracted Heels

#### **CONDITIONS OF THE SKIN**

- Normal Functioning of the Skin/Coat
- Ringworm
- Rain Rot
- Scratches / cracked heel
- Mange
- Sarcoids
- Warts
- Summer Eczema, Sweet Itch, or Culicoids Hypersensitivity

#### **PARASITES**

- Ascarids or Roundworms
- Bots
- Lungworms
- Tapeworms
- Stomach Worms
- Pinworms
- Threadworms

#### **EMERGENCY CONDITIONS**

- Physical Shock
- Electrical Shock
- Trauma
  - Bleeding
  - Fractures
  - Lacerations
  - Acute Laminitis
- Exhausted Horse Syndrome
- Exertional Rhabdomyolysis
  - Azoturia
  - Tying Up
  - Endurance-related Myopathy
- Poisoning
  - Snake Bites

- Organophosphates
- Anaphylactic Shock
- Plant Poison

### **ZOONOTIC DISEASES**

- Understanding a zoonotic disease
- Anthrax
- Brucellosis
- Campylobacter
- Dermatophytosis
- Giardia
- Leptospirosis
- Rabies
- Salmonellosis

### **EQUINE BACTERIAL DISEASES**

- Botulism
- Lyme Disease
- Strangles
- Tetanus

### **EQUINE VIRAL DISEASES**

- Equine Encephalomyelitis
- Equine Herpes Virus
- Equine Infectious Anemia
- Equine Influenza
- West Nile Virus

### **NEUROLOGICAL**

- Equine Protozoal Myeloencephalitis
- Wobbler's Syndrome

### **ALLERGIES**

### **CANCER**

### **SAMPLE QUESTIONS**

1. Inflammation of the eye should always be examined by a veterinarian.
  - a. True
  - b. False
  
2. Flies are carriers of most equine parasites.
  - a. True
  - b. False
  
3. Sarcoids are

- a. swellings on the ergot
  - b. allergic reactions of the skin
  - c. skin tumors
4. Horses diagnosed with Strangles are
- a. isolated from other horses
  - b. revaccinated immediately
  - c. generally treated with antibiotics
  - d. kept in a cool, damp stall
5. Stress is not a contributing factor in contracting EPM.
- a. True
  - b. False

Answer Key: 1.a, 2.b, 3.c, 4.a, 5.b

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**Online**

Center for Disease Control and Prevention (CDC), US Department of Health and Human Services: Division of Foodborne, Mycotic and Bacterial Diseases

<http://www.cdc.gov/nczved/dfbmd/>

CDC, National Center for Zoonotic, Vector-borne and Enteric Diseases

<http://www.cdc.gov/nczved/>

National Agricultural Library: Animal Welfare Information Center (US Department of Agriculture): includes West Nile Virus bibliography

<http://www.nal.usda.gov/awic/pubs/WestNile07/websites.shtml>