Lesson Plan: Nervous and Endocrine Pathology

5 minutes: Attendance and Breath of Arrival

50 minutes: Nervous and Endocrine Pathology
Classroom Rules

Punctuality- everybody's time is precious:

- Be ready to learn by the start of class, we'll have you out of here on time
- Tardiness: arriving late, late return after breaks, leaving early

The following are not allowed:

- Bare feet
- Side talking
- Lying down
- Inappropriate clothing
- Food or drink except water
- Phones in classrooms, clinic or bathrooms

You will receive one verbal warning, then you'll have to leave the room.
Nervous System Pathology
(Werner Page 146)

**Chronic Degenerative Disorders**
- Alzheimer disease
- Amyotrophic lateral sclerosis
- Huntington disease
- Peripheral neuropathy

**Movement Disorders**
- Dystonia
- Spasmodic torticollis
- Parkinson disease
- Tremor
Nervous System Pathology
(Werner Page 146)

Infectious Disorders
- Encephalitis
- Herpes zoster
- Meningitis
- Polio
- Postpolio syndrome

Psychiatric Disorders
- Addiction
- Anxiety disorders
- Attention deficit hyperactivity disorder
- Autism spectrum disorder
- Depression
- Eating disorders
Nervous System Pathology
(Werner Page 146)

Nervous System Disorders
- Bell palsy
- Complex regional pain syndrome
- Spinal cord injury
- Stroke
- Traumatic brain injury
- Trigeminal neuralgia

Nervous System Birth Defects
- Spina bifida
- Cerebral Palsy
Nervous and Endocrine System Pathology
(Werner Page 146 and 404)

Other Nervous System Conditions
- Fibromyalgia
- Headaches
- Meneire disease
- Epilepsy
- Sleep disorders
- Vestibular balance disorder

Endocrine System Disorders
- Diabetes
- Hyperthyroidism
- Hypothyroidism
- Metabolic syndrome
- Thyroid cancer
Nervous System Pathology

**Peripheral neuropathy** Damage to peripheral nerves. Often the result of other underlying conditions, pathogens or toxic substances.

**Risks and Benefits**

Soothing touch may provide benefit if:
- Numbness doesn’t interfere with sensation of pain and pressure
- Pain or increased sensitivity don’t make massage painful
- It improves symptoms rather than exacerbating them
- Underlying conditions allow for bodywork
Nervous System Pathology

Spasmodic torticollis (AKA: cervical dystonia)  Most common form of dystonia. Involves unilateral contractions of neck rotators, usually sternocleidomastoid.

Risks and Benefits
- Be aware of how medications affect the client
- Any bodywork that is comfortable to receive is safe
- Can help fatigue and reduce stress
**Nervous System Pathology**

**Postpolio syndrome**  Group of symptoms suffered by survivors of polio.  
Progressive muscular weakness.

**Risks**
- Acute infection contraindicates massage

**Benefits**
- Massage helps with strength, muscle tone, and fatigue
Nervous System Pathology

**Depression**  Group of mood disorders that can result in persistent feelings of sadness, guilt, and/or hopelessness.

**Risks and Benefits**
- No risks unless the clients stops taking medication without medical supervision
- Massage is very beneficial for depression
Nervous System Pathology

**Spinal cord injury**  Damage to some or all of the spinal cord fibers. Caused by trauma, tumors, or bony growths.

**Risks**
- Vulnerability to infection and other complications
- Numbness interferes accurate feedback from the client
- **Autonomic dysreflexia**  Minor stimulus causing uncontrollable sympathetic responses such as a pounding headache, increased heart rate, flushing, sweating, and dangerously high blood pressure.

**Benefits**
- Massage can weave together functioning and non-functioning parts of the body for a person with permanent nerve damage.
Nervous System Pathology
Spinal Cord Injury
Nervous System Pathology

Stroke (AKA: cerebrovascular accident, or brain attack)  Damage to brain tissue. Caused by blockage in blood flow or by an internal hemorrhage.

Risks and Benefits
- Risk of cardiovascular conditions is increased
- Caution near the carotid artery to avoid freeing a clot or plaque
- Massage can be very supportive and useful
Nervous System Pathology

Stroke

- Area of damage
- Clots form in arteries going to head (cerebral thrombosis)
- Plaque
- Thrombotic blood clot
- Clots form in heart (embolism)
Fibromyalgia

Chronic pain syndrome. Neuroendocrine disruption, sleep disorders, predictable patterns of tender points in muscles and other soft tissues.

Risks and Benefits

- Beware of hypersensitivity and don’t overtreat
- Helps reduce pain, improve sleep, and add to quality of life

Nervous System Pathology
Nervous System Pathology

Fibromyalgia

- Low cervical
- Second rib
- Lateral epicondyle
- Knee
- Occiput
- Trapezius
- Supraspinatus
- Gluteal
- Greater trochanter
**Nervous System Pathology**

**Headaches**  One of the most common physical problems in the range of human experience. Pain caused by muscular tension, nerve irritation, vascular spasm and dilation, and chemical imbalances.

**Risks**
- Infection or fever contraindicate massage
- Massage may exacerbate migraines

**Benefits**
- Massage in between migraines may reduce frequency or intensity
- Tension-type headaches indicate massage
Nervous System Pathology

Headaches
Nervous System Pathology

Sleep disorders  Collection of problems that make it difficult to get enough sleep or to wake up feeling rested and refreshed. Includes insomnia, sleep apnea, restless leg syndrome, narcolepsy, circadian rhythm disruption.

Risks and Benefits
- No risks
- Sleep disorders indicate massage
- Massage can improve the quality of sleep and reduce mental and physical stresses that may interfere with sleep
Endocrine System Pathology

Type 1 diabetes mellitus  Autoimmune disorder resulting in hyperglycemia. Insulin deficiency due to destruction of insulin-producing beta cells in the pancreas. Caused by exposure to certain drugs or chemicals, or complications with certain types of infections.

Type 2 diabetes mellitus  Disorder resulting in hyperglycemia. Caused by pro-diabetes behavior and genetic predisposition. Can be controlled with diet, exercise, and medication.
Endocrine System Pathology

Risks
- If circulatory or urinary systems are impaired, client may not be able to adapt to rigorous massage
- Advanced disease can result in skin damage and ulcers, especially on the legs and feet
- Numbness can interfere with accurate feedback
- Massage could cause hypoglycemia (a drop in blood sugar)

Benefits
- If diabetes is well managed and without contraindicating complications, the client should be able to enjoy the usual benefits
Nervous and Endocrine Pathology