CAES9721 – Academic Communication for Nursing Students
Medical Terminology Assessment 2023-24

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Task 1 – Instructions

1. **Look for a maximum of 2 medicine or healthcare related articles or excerpts (within 500 words each). They can be articles from academic journals or from reputable healthcare publications).**

2. **Find 10 medical terms (of Latin or Greek origin – DO NOT choose layperson terms e.g. headache), general English terms (e.g. logistics), or drug names (e.g. Loradatine). Check the word parts list to determine whether you are referring to Greek/Latin terms.**

3. **For each medical term, provide the following information:**
   a. **Identify the primary stress in the term by underlining the relevant syllable.**
   b. **Breakdown the terms into different components [prefix, roots, combining vowels (if applicable), suffixes] and provide the meaning of each component**
   c. **Define the terms highlighted in accessible and plain English that can be understood by an educated layperson.**

1) Task 1 – Analyzing Medical Terms

Morning Report Questions

Q: How is SIAD diagnosed?

A: The diagnosis of SIAD requires clinical confirmation of **euvolemic** **hypotonic** **hyponatremia**. Given the low sensitivity and specificity of a physical examination in assessing volume status, European guidelines prioritize measurement of urine osmolality and sodium. Urine studies showing **natriuresis** (sodium, >30 mmol per liter) and inappropriate concentration (osmolality, >100 mOsm per kilogram of water) are consistent with SIAD. However, diagnosing SIAD requires ruling out secondary adrenal insufficiency and severe **hypothyroidism**. In practice, requisite serum and urine tests for diagnosis are often omitted; the Hyponatremia Registry showed that those tests were completed in only 21% of patients in whom SIAD was diagnosed.

Q: What therapies are used for the outpatient management of SIAD?

A: Fewer than 5% of patients with hyponatremia have sufficiently severe symptoms to need emergency treatment. For the majority of patients, treatment focuses on addressing the underlying cause (or causes) and is typically administered on an outpatient basis; exceptions include treatment of patients who are hospitalized for management of an underlying cause of hyponatremia or whose serum sodium level is less than 120 mmol per liter. Several therapies are available for outpatient treatment of patients with SIAD. Fluid restriction, the first-line treatment, is inexpensive and safe but of limited efficacy. Other therapies involve increasing salt, urea, or protein intake, although data are lacking from randomized, blinded trials. Tolvaptan, which competitively inhibits the vasopressin 2 receptor in the collecting duct, is a highly effective therapeutic agent. More recent data support a potential role for empagliflozin, a sodium glucose cotransporter 2 inhibitor that promotes osmotic diuresis by means of **glucosuria** in the treatment of patients with SIAD.

1. Euvo**le**mic	
Prefix	eu – good/well
Root:	vol – volume
Suffix:	emic – condition of the blood
Definition: (adj.)	Having a normal volume of body fluids in blood.

2. Hypo**ton**ic	
Prefix:	hypo – deficient
Root:	tonic – tension
Definition: (adj.)	Having a lower water tension (osmotic pressure)

3. Hypo**na**tremia	
Prefix:	hypo – deficient
Root:	natr(o) – natrium
Suffix:	emia - condition of the blood
Definition: (noun)	Deficient of sodium (natrium) in blood

4. Natriu**re**sis	
Root:	natr(o) – natrium
Combining vowel:	-i-
Suffix:	uresis – urination
Definition:	The presence of sodium (natrium) in the urine.

5. Hypo**thy**roidism	
Prefix:	hypo – deficient
Root:	thyroid – related to thyroid gland
Suffix:	ism – a form of condition
Definition:	The condition that deficient function of the

https://resident360.nejm.org/clinical-pearls/syndrome-of-inappropriate-antidiuresis
(Article Word Count: 275)

	thyroid gland, in order words, insufficient secretion of thyroid hormone by the thyroid gland.

6. Gluco**su**ria	
Root:	glucos – Glucose
Suffix:	uria – related to urine
Definition:	The condition that glucose is presence in the urine.

Task 1 – Analyzing Medical Terms – Cont'd

Morning Report Questions

Q: What are some of the causes of noncirrhotic **hyperammonemia**?

A: Hyperammonemia can be caused by an increased protein load from an oral or parenteral source or from gastrointestinal bleeding. Hyperammonemia can also be caused by a catabolic state, such as severe malnutrition. Muscle is an important extrahepatic site of ammonia metabolism, and severe sarcopenia can lead to hyperammonemia. Certain drugs and toxins, including antiepileptic agents such as valproate, can cause urea-cycle dysfunction and hyperammonemia. Hyperammonemia can also be due to infections with urease-producing bacteria, including Klebsiella pneumoniae.

Q: What is the "gastric bypass hyperammonemia syndrome"?

A: There is an increasingly recognized association between noncirrhotic hyperammonemia and a history of Roux-en-Y gastric bypass, and some experts have proposed naming this phenomenon the "gastric bypass hyperammonemia syndrome." Case reports describe patients with hyperammonemic **encephalopathy** who are typically middle-aged and female and do not have clinically significant liver disease. Hyperammonemic encephalopathy may develop at various points after bypass surgery, with hallmark findings including **hypoalbuminemia**, nutritional deficiencies, an elevated plasma glutamine level, and a low zinc level. It has been hypothesized that undiagnosed **hemizygous** pathogenic variants in the gene that encodes ornithine transcarbamylase (OTC) in women could contribute to an elevated risk of urea-cycle dysfunction. A role for zinc deficiency in urea-cycle enzymatic dysfunction has also been hypothesized. Increased production of ammonia, portosystemic shunting, an altered intestinal microbiome, and a profound catabolic state after Roux-en-Y gastric bypass may all contribute to the pathogenesis of this

7. Hyper**am**monemia	
Prefix:	hyper – excessive
Root:	ammon – related to ammonia
Suffix:	emia - condition of the blood
Definition: (adj.)	Excessive ammonia presence in blood.

8. En**ce**phalopathy	
Root:	encephal(o) – brain
Suffix:	pathy – disease
Definition:	The disease affecting the brain

9. Hypo**al**buminemia	
Prefix:	hypo – deficient
Root:	albumin – a protein called albumin
Suffix:	emia - condition of the blood
Definition:	Deficient of albumin in blood

10. Hemi**zy**gous	
Prefix:	hemi – half
Root:	zygous – related to zygote.
Definition:	Having the zygote that only have half of the genetic materials.

syndrome, although more investigation is needed to understand this rare and unique disease.	
https://resident360.nejm.org/clinical-pearls/a-woman-with-confusion (Article Word Count: 258)	

Task 2 – Instructions

Create **5 new terms** for conditions/diseases/medical procedures/treatments that you think may appear in the future. **State why** you think they might occur. Use items from the word part list and follow medical terminology formation conventions. **Each word part can only be used once.**
Please remember the word formation rules from Part 3 of the Medical Terminology Booklet when making your words. Also check that you have not created an existing term.
It does not matter if your words seem nonsensical, as we are testing your understanding of medical terminology formation and not your medical knowledge.

Put down the 5 new terms that you have created in the box. Remember to provide the terms, define them and explain briefly why you think the conditions/diseases/treatments will occur in the future.

2) Task 2 – Coining New Medical Terms

Algesiscopy	
Definition:	A process of viewing / tracing the pain.
In the current era, scientists have been instrumental in identifying and tracing various body parts that may be affected by ailments. This includes X-rays and colonoscopies among others. Looking forward, I anticipate that further advancements in technology will pave the way for more sophisticated tools to probe the root causes of pain. These instruments will enable doctors to pinpoint the precise organ from which the patient is experiencing discomfort, thereby reducing the frequency of diagnostic examinations required.	

Thrombophage	
Definition:	Something that can eat the blood clots.
In the current era, Scientists have now developed tiny bio-robots that can be swallowed by patients in capsule form, enabling them to administer necessary medication to their body organs with precision. In the future, it is conceivable that scientists may create tiny bio-robots / artificial cells capable of eating the blood clots that could potentially lead to strokes in the blood vessels, thereby eliminating the need for surgery.	

Arteriopoiesis	
Definition:	A process of forming an artery.
In the current era, researchers have successfully isolated and utilized stem cells to form the new muscle tissues. In the future, scientists may inject stem cells into human bodies to form a fully functional artery with well tension. This approach would enable individuals suffering from thrombosis to dispense with lengthy medication treatments.	

Carcinase	
Definition:	A enzyme that can breakdown the cancer cell
In the current era, researchers employ chemotherapy to eliminate cancer cells, yet the adverse effects on normal cellular structures are substantial. In the future, with the advancement of biotechnology, there may be biological enzymes that can target and destroy cancer cells, much like antibiotics, to minimize the side effect of cancer treatments.	

Esthesiphrenia	
Definition:	The mental disorders that related to sensation.
In the current era, as brainwave and psychological therapy research become increasingly advanced, there are medical technology teams that can use AI computation to analyze brainwaves and utilize AI's ability to create images to demonstrate what the clients are thinking about (images). It is believed that in the future, the development of technology will make psychological diagnosis more closely linked to biological brainwaves, such as sensation.	

3) Creating a Medical Term game

Choose **15 medical terminology items** which belong to a theme (state how they belong together e.g., terms related to the kidneys, terms related to physical examination, terms related to skin conditions).

Create a game that would be useful to students learning medical terminology. It can be boardgame, crossword, Pictionary, etc. but **must have the goal of vocabulary learning i.e. the game helps players understand the meaning behind medical terminology items.** It can be paper-based or an electronic resource (accessible through a link). For electronic resources, screenshot each stage and paste onto a format that can be uploaded to Turnitin. **Any work that cannot be detected by Turnitin for plagiarism check WILL NOT be marked**. You **CANNOT** use the activity shown on pages 6 & 7 of this document nor the game you created and played with your classmates during the semester.

You **MUST provide an answer key** in which you **must also provide definitions of your terms.**

Finally, briefly explain in a few sentences how this resource could be used for learning vocabulary.

Task 3 – Creating a Medical Term Activity

List 15 medical terms here and explain how you have chosen to group the words.

Words:

Osteocele	Osteopathy	Osteocyte
Osteoscopy	Osteomegaly	Osteoporosis
Osteotomy	Osteophytosis	Osteotome
Osteodystrophy	Osteoblasts	Osteopenia
Osteosclerosis	Osteomalacia	Osteodesis

Definition:

1.	**Osteopathy**	**(Definition: Treatment for Bone diseases)**
2.	**Osteocele**	**(Definition:Bone swelling)**
3.	**Osteocyte**	**(Definition:Bone Cells)**
4.	**Osteoscopy**	**(Definition:Visual examination of Bone)**
5.	**Osteomegaly**	**(Definition:Enlargement of Bone)**
6.	**Osteoporosis**	**(Definition:Bone with porous)**
7.	**Osteotomy**	**(Definition:Bone surgery that cuts the bones)**
8.	**Osteophytosis**	**(Definition:Infection of the Bone)**
9.	**Osteotome**	**(Definition:Instrument used for Bone surgery)**
10.	**Osteodystrophy**	**(Definition:Abnormal growth of bone)**
11.	**Osteoblasts**	**(Definition: Germination of Bone-(Form new bones))**
12.	**Osteopenia**	**(Definition: Deficiency of bone density)**
13.	**Osteosclerosis**	**(Definition:Hardening & thickening of Bone)**
14.	**Osteomalacia**	**(Definition:Softening of Bone)**
15.	**Osteodesis**	**(Definition:A stable bone surgery technique)**

Grouping Principle:
I have chosen the above words as they are all related to the bone.

Explain how the above task can promote learning of medical terms.

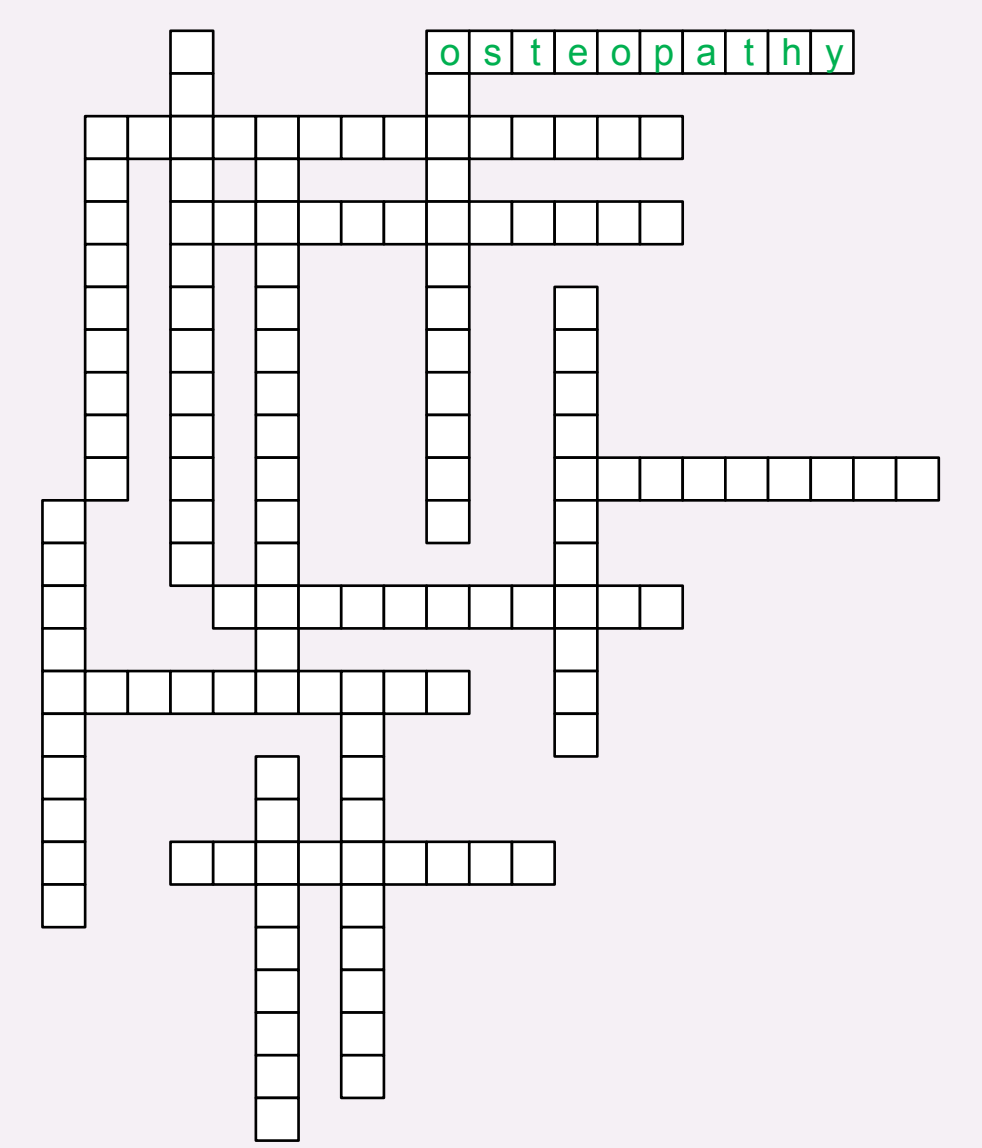
This interesting game can engage students in learning Medical Terminology by helping students deepen their understanding of how Roots and Suffixes form a Medical Terminology and its definition, allowing them to have a more profound understanding of the composition of Medical Terminology.

Put down the actual game that you have designed here. Provide instructions and answers.

(See Next Page)

Word Fit

Medical Terminology related to Bone



Instructions:

There are 15 medical terminologies related to Bone below provided for you to fill in them into the Criss Cross Puzzles above. Words can go across or down and letters are shared when the words intersect. In addition, you have to write down the definition of each Medical Terminology provided. You can use the word part list given to you in Session 1 to help you understanding the definition of each Medical Terminology. The first one (***Osteopathy***) has been done as an example.

1. Osteopathy (Definition: Treatment for Bone diseases) 2. Osteocele (Definition:_____)

3. Osteocyte (Definition:_____) 4. Osteoscopy (Definition:_____)

5. Osteomegaly (Definition:_____) 6. Osteoporosis (Definition:_____)

7. Osteotomy (Definition:_____) 8. Osteophytosis (Definition:_____)

9.Osteotome (Definition:_____) 10. Osteodystrophy (Definition:_____)

11. Osteoblasts (Definition:_____) 12. Osteopenia (Definition:_____)

13. Osteosclerosis (Definition:_____) 14. Osteomalacia (Definition:_____)

15. Osteodesis (Definition:_____)

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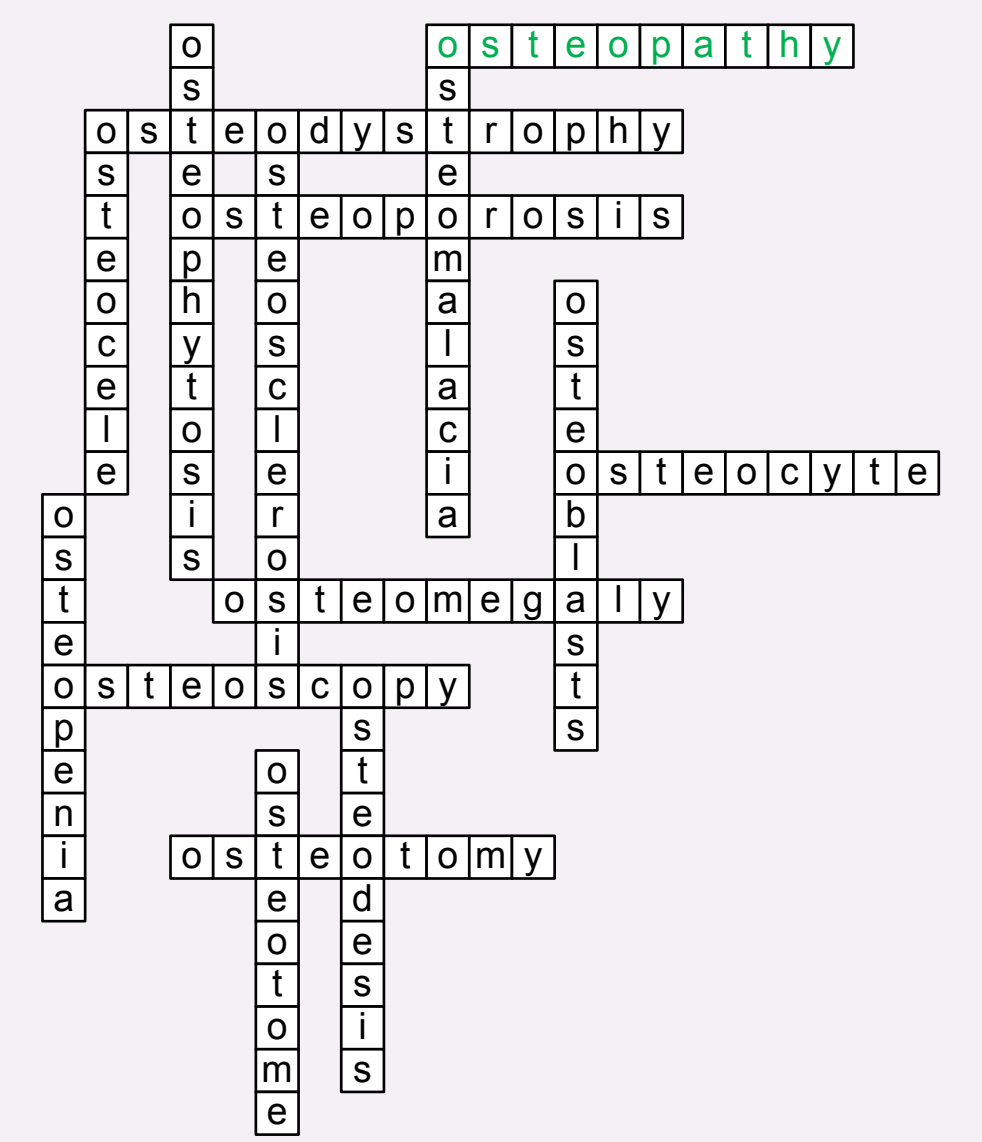
Suggested Answer Sheet

Word Fit

Medical Terminology related to Bone



Suggested Answer Keys:

1. Example: Osteopathy (Definition: Treatment for Bone diseases)
2. Osteocele (Definition:**Bone swelling**)
3. Osteocyte (Definition:**Bone Cells**)
4. Osteoscopy (Definition:**Visual examination of Bone**)
5. Osteomegaly (Definition:**Enlargement of Bone**)
6. Osteoporosis (Definition:**Bone with porous**)
7. Osteotomy (Definition:**Bone surgery that cuts the bones**)
8. Osteophytosis (Definition:**Infection of the Bone**)
9. Osteotome (Definition:**Instrument used for Bone surgery**)
10. Osteodystrophy (Definition:**Abnormal growth of bone**)
11. Osteoblasts (Definition: **Germination of Bone-(Form new bones)**)
12. Osteopenia (Definition: **Deficiency of bone density**)
13. Osteosclerosis (Definition:**Hardening & thickening of Bone**)
14. Osteomalacia (Definition:**Softening of Bone**)
15. Osteodesis (Definition:**A stable bone surgery technique**)

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