

FAQ Patient Care 7. Which drugs can have nutrition interactions in Ebola Treatment Units (ETUs)?

Some of the drugs commonly used for case management in EVD patients can impact or be impacted by a patient's diet and nutrition. Special care must therefore be taken when administering these drugs.

Table 1 includes drugs from the 'WHO *Optimized Supportive Care for Ebola Virus Disease - Clinical Management Standard Operating Procedures (2019)*' that may warrant special attention, and recommendations for avoiding side effects. Please note, this list is not exhaustive.

Table 1. EVD case management drugs with known diet and nutrition interactions

Drug	Drug administration route	Drug category/ indication	Caution regarding diet and nutrition	Recommendations
Ceftriaxone	IV	Antibiotic	Ceftriaxone is highly susceptible to binding calcium within the IV catheter, forming a complex, which can be fatal. ^{1,2} Calcium deposition can result from administration of Lactated Ringer's and ceftriaxone in the same IV line. ³	<ul style="list-style-type: none"> For patients receiving IV Lactated Ringer's: flush line with at least 10 ml 0.9 per cent saline before using line to administer ceftriaxone.³
Cefixime	PO	Antibiotic	Cefixime can form complexes with divalent ions, such as calcium and magnesium, reducing absorption.	<ul style="list-style-type: none"> Avoid concomitant intake with milk products. Consumption of dairy products can be continued but with close monitoring for drug reaction.¹
Ciprofloxacin	IV/PO	Antibiotic	Ciprofloxacin absorption is reduced by casein (protein present in milk) and multivalent cations, such as calcium, iron, zinc and magnesium. ^{1,4} Drug bioavailability when administered through nasogastric tube feeding tube is decreased by 27–67 per cent. ²	<p>If administered orally:</p> <ul style="list-style-type: none"> Avoid concomitant intake with milk products.¹ Avoid concomitant intake with orange juice.⁵ Avoid giving with vitamins and micronutrients (e.g., iron, calcium, magnesium) or with antacids (e.g., aluminum hydroxide or magnesium hydroxide). <p>If administered via nasogastric tube:</p> <ul style="list-style-type: none"> Suspend enteral nutrition for 1–2 hours before and 1–2 hours after drug administration). Drug dosage adequacy should be checked.²

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Cefixime	PO	Antibiotic	Cefixime can form complexes with divalent ions, such as calcium and magnesium, reducing absorption.	<ul style="list-style-type: none"> Avoid concomitant intake with milk products. Consumption of dairy products can be continued but with close monitoring for drug reaction.¹
Cloxacillin / Dicloxacillin	IV/PO	Antibiotic	Cloxacillin binds to divalent cations, such as calcium and magnesium, forming a complex and reducing absorption. ¹	<p>If administered orally:</p> <ul style="list-style-type: none"> Avoid concomitant intake with milk products. Consumption of dairy products can be continued but with close monitoring for drug reaction.¹
Metoclopramide	IV/PO	Heartburn, acid reflux, GERD, stomach discomfort, gastroparesis, vomiting	Decreased food absorption ³	<ul style="list-style-type: none"> Space meals into more frequent and smaller feedings.³ Maintain optimal hydration.³
Phenytoin	IV/PO	Anti-convulsant	Phenytoin is highly bound to albumin; free albumin may have elevated levels in patients with severe malnutrition and low albumin levels. ⁷ Phenytoin level is decreased by up to 70 per cent when co-administered with enteral nutrition formulation or through nasogastric tube. ^{2,7}	<p>Any mode of administration:</p> <ul style="list-style-type: none"> Free phenytoin levels should be monitored when serum albumin concentration is < 3 g/dL.⁸ <p>If administered via NGT:</p> <ul style="list-style-type: none"> Suspend enteral nutrition -2 hours before and after dose.⁸ Tube should be flushed prior to and following drug administration. Patients should be closely monitored.^{4,8}
Ranitidine	PO	Anti-ulcer (stress ulcer)	Reduced acid production in the stomach. ⁶	<ul style="list-style-type: none"> Space meals into more frequent feedings in smaller portions.⁶

PO = Per os (orally). IV = Intra-venous. GERD = Gastro-esophageal reflux disease

References

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