Diagnosis of diabetes mellitus in dogs according to ALIVE criteria

Signalment, history and physical examination

Anorexia, vomiting, diarrhea, dehydration and/or lethargy

Check for ketones **(1)**

Diabetic ketoacidosis or non-ketotic hyperglycemic hyperosmolar syndrome **(2)**

Insulin, fluid therapy, supportive treatments **(3)**

CBC, biochemistry, urinalysis, systemic blood pressure

Systemic hypertension

Antihypertensive treatment

Concurrent disease **(4)**

Treat appropriately

Intact bitch

YES

Ovari(ohyster)ectomy

Concurrent administration of insulin antagonistic drugs (e.g. glucocorticoids or progestagens)?

YES

Reduce/stop medications

Owner education, dietary recommendations **(5)**, exercise

Insulin therapy **(7)**

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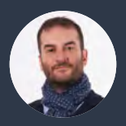
KEY: Coloured boxes correlate with the sections of the guidance note. Numbers in brackets (e.g. (1)) correlate with numbered sections of the guidance note.

- Diagnostic Protocol
- Diagnosis
- Treatment



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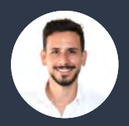

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History, physical examination, body weight, glucose monitoring **(8)** glycated proteins **(9)**

Clinical hypoglycemia **(11)**

Reduce/stop insulin

Insulin dose adjustment, if required **(10)**

Glucose consistently low

Glucose values consistently <150 mg/dL (8.3 mmol/L)

Reduce insulin

Good glycemic control:

- Absence of clinical signs
- Most glucose values between 80-250 mg/dL (4.4-13.9 mmol/L)
- Glucose nadir between 80-150 mg/dL (4.4-8.3 mmol/L)

Keep insulin dose the same

Glucose consistently high/marked glycemic variability

Insulin ineffective in lowering glucose concentrations or marked glycemic variability

Improper handling of insulin?

YES

Correct the problem

Return to

NO

Consider additional testing and/or diagnostic imaging

Concurrent disease **(4)** detected?

YES

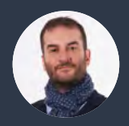
Treat appropriately

Reassess glycemic control

Return to

NO

Consider changing insulin type



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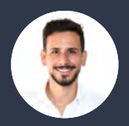

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