Did you know?

Your quest to detect hidden inflammation just got much easier

HPT FELINE

Detect, gauge & monitor inflammatory disease

Clinical Lab Report *example*

Feline Specific Haptoglobin (HPT) →

Interpretation →

HPT FELINE

				REPORT DATE: 3-Sep-2014
TEST NAME	**RESULT**	**UNITS**	**FLAG**	**REFERENCE INTERVAL**

	Decreased (D): < 25
48.9 mg/dL	Optimum: 25 - 64.9
f-HPT	Normal: 25 - 110
feline specific haptoglobin	Low Inflam (L): 110.1 - 140
	Mod Inflam (M): 140.1 - 300
	High Inflam (H): ≥ 300.1

0 50 100 150 200 250 300 350 400 450 > 500

Dec   Low   Moderate   High

Flag Interpretation
Decreased: intravascular hemolysis, severe liver disease
Low to Moderate: inflammatory diseases such as cancer, IBD, heart, kidney disease
High: diseases that cause severe inflammatory response such as cancer, IBD, infection, and autoimmune conditions such as IMHA . Infection and autoimmune disorders such as IMHA often trigger HPT levels in excess of 400 mg/dL.

General Comments
HPTfeline measures feline-specific haptoglobin (f-HPT), an acute phase protein, produced mainly in the liver as a response to inflammation and the release of cytokines. Serum HPT has been shown to be an effective measure of general inflammation. The concentration of HPT correlates to both the severity and duration of the inflammatory stimuli.

Acute phase proteins constitute a group of proteins (e.g., CRP, haptoglobin, serum amyloid A) which are part of the innate ho st defense system. Their blood concentration changes rapidly in response to any tissue damaging causes such as infection, immune -mediated disorders, neoplasia, trauma, and others. HPT decreases rapidly when inflammatory stimulation is no longer present.

A low inflammatory state is healthy, however HPT has a role in removing free hemoglobin to prevent kidney damage and to retur n iron stores. Therefore, HPT levels can be decreased in severe liver disease and hemolytic anemia, particularly intravascular.

HPT measurements may be useful for:
Preventative Care Health Screen: The high sensitivity and low specificity of the acute phase response allows for potential detection of subclinical or pre -clinical inflammatory disorders. An elevated HPT indicates the presence, but not the cause, of an inflammatory disease state .

Perioperative Monitoring: HPT levels are expected to increase post-operatively, with the magnitude of increase related to the intensity of the surgical trauma. Normalization of HPT within 1-2 weeks post-operatively has been suggested as being more effective in monitoring post-surgical progress than WBC counts.

Monitoring Disease Progression/Response to Treatment: HPT has been shown to be an effective marker for disease activity and response to therapy in a wide range of inflammatory conditions such as infection, inflammatory bowel disease, IMHA, heart disease, kidney disease and other systemic disorders.

Hemolytic Anemia: HPT binds free hemoglobin levels will be decreased in intravascular hemolysis. In evaluating patients with suspected hemo lytic anemia, HPT can be useful in differentiating intra vs extra vascular hemolysis.

Tech: RR

*Feline haptoglobin is also available as part of the Tkfeline cancer panel. The report shown here is for feline haptoglobin as a standalone test.

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Feline Inflammatory Disease

Clinical Background

Chronic inflammation is both associated with, and the root-cause of disease. Left unchecked, chronic inflammation can lead to disease advancement and even death.

HPTFELINE is a blood test that detects systemic inflammation in response to infection, tissue damage, neoplasia, and trauma. The test is used to confirm the presence of inflammatory disease, detect hidden disorders, monitor the effectiveness of treatment, and assure complication-free recovery.

Test Information:

Sample Type: Serum >1mL

Interferences: Gross lipemia
              Gross hemolysis

Stability: 4°C: 4 hours
            -20°C: 1 month

Reference Ranges:

f-HPT(*mg/dL*):
Decreased: <25
Optimum: 25 – 65
Normal: 25 – 140
Elevated: >140

Interpretative Information:

⬆ Cancer
   Heart Disease
   Kidney Disease
   Autoimmune diseases
   Infection
   Other Inflammatory Disease

⬇ Liver Disease
   Intravascular Hemolysis

Veterinary Diagnostics Institute®

Role of inflammation
Acute defends, chronic kills

Acute Inflammation
Acute (short-term) inflammation is a vital life-sustaining function. The cascade of events that occurs is needed to initiate a defense against invading organisms and to repair tissue damage that occurs from trauma, infection, and disease.

When inflammation becomes chronic
While acute inflammation is normally tightly controlled and part of the healing process, chronic (long-term) inflammation leads to the production of free radicals and other destructive agents, creating an environment that propagates disease.

HPTFELINE

Effective Wellness Screen
Cats are notorious for hiding any signs of illness. Since HPT measures inflammation, regardless of the source, the cat cannot be considered "well" if inflammation is present. Further if the inflammation becomes chronic it can lead to more serious consequences.

Pre-surgical test
Surgery causes tissue damage and will induce inflammation. If the cat is already in an inflammatory state further inflammation stimuli caused by surgery could induce systemic shock (SIRS). If surgery is elective, the surgery should be postponed and the cause of the inflammation investigated and resolved.

Therapeutic Monitoring
Track patients' response to treatment or disease progression

Response to Therapy
There is a direct correlation between HPT concentration and the severity and duration of the inflammation. Hence if therapy is successful, HPT will drop quickly. This is useful to monitor the treatment of infections, IBD, LSA, pancreatitis, and other diseases that induce an inflammatory response. HPT concentrations will react to changing states within the cat within hours making it a very useful measurement for "real-time" monitoring.

Responsive to therapy