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EMERGENCY ULTRASOUND FELLOWSHIP
SUDBURY, ONTARIO ~ 2014-2015 ACADEMIC YEAR

Applications are invited for the position of Emergency Ultrasound Fellow. Sudbury's emergency physicians have been performing emergency ultrasound since 2001. Sudbury is the base for the Emergency Department Echo courses. EDE 1 has taught "EDE" to over 7000 physicians worldwide (www.the-ede-course.com). The EDE 2 (Advanced) Course made its debut in 2009 (www.ede2course.com). The course manuals have been published as a book: "Point-of-Care Ultrasound for Emergency Physicians". Our emergency department is recognized as a training centre by the Canadian Emergency Ultrasound Society (CEUS), and has welcomed dozens of emergency physicians from across the country for CEUS independent practitioner training. Emergency ultrasound is an integral part of the curriculum of Sudbury's CFPC(EM) residency – one of the largest in the country. Sudbury is the East Campus of the Northern Ontario School of Medicine. The Sudbury ED has one of the highest volumes and acuities in Ontario. Health Sciences North is the Trauma and Tertiary Care Centre for Northeastern Ontario.

The fellow will develop expert skills in basic and advanced emergency ultrasound. Valuable experience in education and research will be gained. The fellow will have the opportunity to become an instructor with the EDE courses, as well as a CEUS instructor. The main objective of the one-year fellowship is to train future leaders in emergency ultrasound in Canada.

Applicants must be certified in emergency medicine (FRPC(C), CFPC(EM), or ABEM) or in the last half of a Royal College emergency medicine residency. FRCP residents in will be considered for a 6-12 month rotation on a case-by-case basis. Applicants must be eligible for Ontario licensure. Interested candidates should submit a letter and CV no later than Jan 15, 2014. To submit an application or for further information, please contact:

Health Sciences North
Horizon Santé-Nord

Steve Socransky, MD, FRCPC, ABEM, CEUS
Ray Wiss, MD, CSPQ, CFPC(EM), CEUS
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FULL TIME POSITIONS

CALGARY EMERGENCY DEPARTMENT

The Department of Emergency Medicine (Alberta Health Services – Calgary Zone) is now accepting applications for full time emergency physicians. Flexible start dates are available, beginning throughout 2013.

The Calgary Department of Emergency Medicine encompasses two emergency medicine residency programs and four hospital sites seeing over 260,000 patients per year. The fourth site, the South Health Campus opened in January 2013 and has one of Canada's most advanced Emergency Departments. In addition to a full spectrum of high acuity clinical medicine, trauma and cardiac care, we have active programs in human patient simulation and EM ultrasound, and Calgary is the home of STARS (Shock Trauma Air Rescue Society), one of North America's longest operating rotary wing aero medical systems. The Calgary Department of Emergency Medicine has a growing academic program with research and teaching opportunities.

Calgary is a vibrant, multicultural city (population 1.2 million) near the Rocky Mountains, Banff National Park and Lake Louise with a full range of recreational, sports and cultural opportunities. Alberta emergency physicians are among the highest paid in North America, and enjoy a flexible work/life balance while working is a highly supportive, collegial environment.

Requirements: CCFP (EM), ABEM or FRCPC training and certification is required, as well as eligibility for licensure in the province of Alberta.

Interested applicants should forward their curriculum vitae, cover letter and have 3 letters of recommendation sent to:

Scott H. Banks, MBA, CHRP, CITP
Zone Department Manager, Emergency Medicine
Foothills Medical Centre
Room C231, 1403 -29th St NW
Calgary, AB T2N 2T9

Email: scott.banks@albertahealthservices.ca

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Pr CYANOKIT® 5 g
HYDROXOCOBALAMIN

PRESCRIBING SUMMARY

Patient Selection Criteria

THERAPEUTIC CLASSIFICATION: Antidote (Powder for solution for infusion)

INDICATIONS AND CLINICAL USE: Cyanokit® contains hydroxocobalamin, an antidote indicated for the treatment of known or suspected cyanide poisoning. Cyanokit® is to be administered together with appropriate decontamination and supportive measures.

Identifying patients with cyanide poisoning: Cyanide poisoning may result from inhalation, ingestion, or dermal exposure to various cyanide containing compounds, including smoke from closed space fires. Sources of cyanide poisoning include hydrogen cyanide and its salts, cyanogens, including cyanogenic plants, aliphatic nitriles, or prolonged exposure to sodium nitroprusside. The presence and extent of cyanide poisoning are often initially unknown. There is no widely available, rapid, confirmatory cyanide blood test. Treatment decisions must be made on the basis of clinical history and signs and symptoms of cyanide intoxication. If clinical suspicion of cyanide poisoning is high, Cyanokit® should be administered without delay.

Table 1. Common Signs and Symptoms of Cyanide Poisoning

Symptoms	Signs
• Headache	• Altered Mental Status (e.g., confusion, disorientation)
• Confusion	• Seizures or Coma
• Dyspnea	• Mydriasis
• Chest tightness	• Tachypnea/Hyperpnea (early)
• Nausea	• Bradypnea/Apnea (late)
	• Hypertension (early)/Hypotension (late)
	• Cardiovascular collapse
	• Vomiting
	• Plasma lactate concentration ≥8 mmol/L

In some settings, panic symptoms, including tachypnea and vomiting, may mimic early cyanide poisoning signs. The presence of altered mental status (confusion and disorientation) and/or mydriasis is suggestive of true cyanide poisoning, although these signs can occur with other toxic exposures as well.

Smoke inhalation: Not all smoke inhalation victims will necessarily have cyanide poisoning, and may present with burns, trauma, and exposure to additional toxic substances making a diagnosis of cyanide poisoning particularly difficult. Prior to the administration of Cyanokit,® smoke-inhalation victims should be assessed for the following:

- exposure to fire smoke in an enclosed area
- soot present around mouth, nose and/or oropharynx
- altered mental status

Use with Other Cyanide Antidotes: The safety of administering other cyanide antidotes simultaneously with Cyanokit® has not been established. If the decision is made to administer another cyanide antidote with Cyanokit,® these medicinal products must not be administered concurrently in the same intravenous line (see **DOSAGE AND ADMINISTRATION**).

Geriatrics (≥ 65 years of age): Approximately 50 known or suspected cyanide victims aged 65 or older received hydroxocobalamin in clinical studies. In general, the safety and effectiveness of hydroxocobalamin in these patients was similar to that of younger patients. No adjustment of dose is required in elderly patients.

Pediatrics (< 18 years of age): Limited safety and efficacy data are available for pediatric patients. In infants to adolescents, the dose of Cyanokit® is 70 mg/kg (see **DOSAGE AND ADMINISTRATION**).

CONTRAINDICATIONS: None.

SPECIAL POPULATIONS: For use in special populations, see **WARNINGS AND PRECAUTIONS**, Special Populations.

Safety Information

WARNINGS AND PRECAUTIONS

General: Emergency Patient Management – In addition to Cyanokit,® treatment of cyanide poisoning must include immediate attention to airway patency, adequacy of oxygenation and hydration, cardiovascular support, and management of any seizure activity. Consideration should be given to decontamination measures based on the route of exposure. Cyanokit® does not substitute for oxygen therapy and must not delay the set up of the above measures.

Cardiovascular: Transient, generally asymptomatic, increase in blood pressure may occur in patients receiving hydroxocobalamin. The maximal increase in blood pressure has been observed toward the end of infusion.

Immune: Known hypersensitivity to hydroxocobalamin or vitamin B_{12} must be taken into benefit-risk consideration before administration of Cyanokit,® since hypersensitivity reactions may occur in patients receiving hydroxocobalamin. Allergic reaction may include anaphylaxis, chest tightness, edema, urticaria, pruritus, dyspnea and rash.

Renal: Based on its vasopressor effect, hydroxocobalamin may cause vasoconstriction of the renal vasculature. Since no more than two injections of hydroxocobalamin are to be administered it is unlikely that this will have any effect in patients with normal renal function; the outcome in patients with impaired renal function is unknown.

Sexual Function/Reproduction: No animal studies on male and female fertility and early embryonic development to implantation have been performed. Developmental toxicity including teratogenicity was observed in animal studies at doses that correspond approximately to the maximum recommended human dose (see **TOXICOLOGY**). Hydroxocobalamin levels were detected in urine for some patients up to 35 days following treatment with Cyanokit® indicating that elimination of Cyanokit® from the body may not be completed after 35 days. Based on these data, it is recommended to practice adequate methods of contraception for 2 months following Cyanokit® treatment.

Skin: Photosensitivity – Hydroxocobalamin absorbs visible light in the UV spectrum. It therefore has potential to cause photosensitivity. While it is not known if the skin redness predisposes to photosensitivity, patients should be advised to avoid direct sun while their skin remains discoloured.

Special Populations

Pregnant Women: Animal studies have shown teratogenic effects following daily exposure throughout organogenesis (see **TOXICOLOGY**). There are no adequate and well-controlled studies in pregnant women. However, treatment of maternal/fetal cyanide poisoning may be life-saving. The effect of Cyanokit® on labour and delivery is unknown.

Nursing Women: It is not known whether hydroxocobalamin is excreted in human milk. Because of the unknown potential for adverse reactions in nursing infants, discontinue nursing after Cyanokit® treatment.

Renal Impairment: The safety and effectiveness of Cyanokit® have not been studied in patients with renal impairment. Hydroxocobalamin and cyanocobalamin are eliminated unchanged by the kidneys. Oxalate crystals have been observed in the urine of both healthy subjects given hydroxocobalamin and patients treated with hydroxocobalamin following suspected cyanide poisoning.

Hepatic Impairment: The safety and effectiveness of Cyanokit® have not been studied in patients with hepatic impairment.

Monitoring and Laboratory Tests

Effects on blood cyanide assay: Hydroxocobalamin will lower blood cyanide concentrations. While determination of blood cyanide concentration is not required and must not delay treatment with hydroxocobalamin, it may be useful for documenting cyanide poisoning. If a cyanide blood level determination is planned, it is recommended to draw the blood sample before initiation of treatment with Cyanokit.®

Interference with burn assessment: Because of its deep red colour, hydroxocobalamin has the potential to induce a red colouration of the skin and therefore may interfere with burn assessment. However, skin lesions, edema, and pain are highly suggestive of burns.

Interference with laboratory tests: Because of its deep red colour, hydroxocobalamin has the potential to interfere with determination of laboratory parameters (e.g., clinical chemistry, hematology, coagulation, and urine parameters) (Table 2). In vitro tests indicate that the extent and duration of the interference is dependent on numerous factors such as the dose of hydroxocobalamin, analyte, analyte concentration,

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methodology, analyzer, concentrations of cobalamins-(III) including cyanocobalamin and partially the time between sampling and measurement. Based on in vitro studies and pharmacokinetic data obtained in healthy volunteers the following table describes interference with laboratory tests that may be observed following a 5 g dose of hydroxocobalamin. Interference following a 10 g dose can be expected to last up to an additional 24 hours. The extent and duration of interference in cyanide-poisoned patients may differ according to the severity of intoxication. Results may vary considerably from one analyzer to another, therefore, caution is required when reporting and interpreting laboratory results.

Table 2. Laboratory Interference Observed with in vitro Samples of Hydroxocobalamin

Laboratory Parameter	No Interference Observed	Artificially Increased[a]	Artificially Decreased[a]	Unpredictable[c]	Duration of Interference
Clinical Chemistry	Calcium Sodium Potassium Chloride Urea Gamma glutamyl transferase (GGT)	Creatinine Total and conjugate bilirubin[b] Triglycerides Cholesterol Total protein Glucose Albumin Alkaline phosphatase	Alanine aminotransferase (ALT) Amylase	Phosphate Uric Acid Aspartate aminotransferase (AST) Creatine Kinase (CK) Creatine Kinase isoenzyme MB (CKMB) Lactate dehydrogenase (LDH)	24 hours with the exception of bilirubin (up to 4 days)
Hematology	Erythrocytes Hematocrit Mean corpuscular volume (MCV) Leukocytes Lymphocytes Monocytes Eosinophils Neutrophils Platelets	Hemoglobin (Hb) Mean corpuscular hemoglobin (MCH) Mean corpuscular hemoglobin concentration (MCHC) Basophils			12 – 6 hours
Coagulation				Activated partial thromoplastin time (aPTT) Prothrombin time (PT) Quick or INR	24 – 48 hours
Urinalysis		pH (with doses ≥ 5 g) Glucose Protein Erythrocytes Leukocytes Ketones Bilirubin Urobilinogen Nitrite	pH (with equivalent doses of < 5 g)		48 hours up to 8 days; colour changes may persist up to 28 days

[a] ≥ 10% interference observed on at least 1 analyzer
[b] Artificially decreased using the diazo method
[c] Inconsistent results
Analyzers used: ACL Futura (Instrumentation Laboratory), AxSYM®/Architect™ (Abbott), BM Coasys[110] (Boehringer Mannheim), CellDyn 3700® (Abbott), Clinitek® 500 (Bayer), Cobas Integra® 700, 400 (Roche), Gen-S Coultronics, Hitachi 917, STA® Compact, Vitros® 950 (Ortho Diagnostics).

Interference with hemodialysis machines: Because of its deep red colour, hydroxocobalamin may cause hemodialysis machines to shut down due to an erroneous detection of a 'blood leak'. This should be considered before hemodialysis is initiated in patients treated with hydroxocobalamin.

ADVERSE REACTIONS (see **Supplemental Product Information** for full listing): **Adverse Drug Reaction Overview:** Serious adverse reactions with hydroxocobalamin include allergic reactions and increases in blood pressure (see **WARNINGS AND PRECAUTIONS**). A total of 347 subjects were exposed to hydroxocobalamin in clinical studies. Of these 347 subjects, 245 patients had suspected exposure to cyanide at the time of hydroxocobalamin administration. The remaining 102 subjects were healthy volunteers who had not been exposed to cyanide at the time of hydroxocobalamin administration. Most patients will experience a reversible red colouration of the skin and mucous membranes that may last up to 15 days after administration of Cyanokit.® All patients will show a dark red colouration of the urine that is quite marked during the three days following administration. Urine colouration may last up to 35 days after administration of Cyanokit.®

Post-Market Adverse Drug Reactions: The following adverse events have been reported in post-marketing surveillance. The relationship of these events to Cyanokit® use is not known. Smoke inhalation and cyanide exposure may have contributed to these events: abnormal laboratory tests, pulmonary edema, cardiac arrest, renal failure – in some cases requiring dialysis, and transient impairment of renal function. To monitor drug safety, Health Canada collects information on serious and unexpected effects of drugs. If you suspect you have had a serious or unexpected reaction to this drug, you may notify Health Canada by toll-free telephone: 1-866-234-2345.

DRUG INTERACTIONS (also see **Supplemental Product Information**): **Overview:** Due to its high molecular weight, hydroxocobalamin is unlikely to interact with or inhibit CYP450 enzymes at clinically relevant concentrations. It is therefore considered to have low potential to be involved in drug-drug interactions with drugs that are substrates of CYP450. Physical incompatibility (particle formation) and chemical incompatibility were observed with the mixture of hydroxocobalamin in solution with selected drugs that are frequently used in resuscitation efforts. Hydroxocobalamin is also chemically incompatible with sodium thiosulfate and sodium nitrite and has been reported to be incompatible with ascorbic acid. Therefore, these and other drugs should not be administered simultaneously through the same IV line as hydroxocobalamin (see **DOSAGE AND ADMINISTRATION**).

Drug-Drug Interactions: No formal drug-drug interaction studies with hydroxocobalamin have been done.

Drug-Food Interactions: No formal drug-food interaction studies with hydroxocobalamin have been done.

Administration

DOSAGE AND ADMINISTRATION: Dosing Considerations: Comprehensive treatment of acute cyanide intoxication requires support of vital functions. Cyanokit® should be administered in conjunction with appropriate airway, ventilatory and circulatory support. The safety of administering other cyanide antidotes simultaneously with Cyanokit® has not been established. If the decision is made to administer another cyanide antidote with Cyanokit,® these medicinal products must not be administered simultaneously through the same intravenous line.

Recommended Dose and Dosage Adjustment: In adults, the initial dose of Cyanokit® is 5 g administered as an IV infusion. Depending on the severity of the poisoning and the clinical response, a second dose may be administered by IV infusion. The maximum recommended total dose is 10 g. In infants and adolescents, the initial dose of Cyanokit® is 70 mg/kg body weight not exceeding 5 g. Depending on the severity of the poisoning and the clinical response, a second dose may be administered by IV infusion. The maximum recommended total dose is 140 mg/kg body weight not exceeding 10 g (Table 3).

Table 3. Initial Dosing Guidelines in Infants and Adolescents

Body weight in kg	5	10	20	30	40	50	60
Initial dose in g	0.35	0.70	1.40	2.10	2.80	3.50	4.20
Initial dose in mL	14	28	56	84	112	140	168

Use in Renal and Hepatic Impairment: Although the safety and efficacy of hydroxocobalamin has not been studied in patients with renal or hepatic impairment, Cyanokit® is administered as emergency therapy in an acute, life-threatening situation only, and no dosage adjustment is required in these patients.

Administration: The initial dose of hydroxocobalamin for adults is 5 g (i.e., two 2.5 g vials or one 5 g vial) administered as an intravenous (IV) infusion over 15 minutes (approximately 15 mL/min). Depending upon the severity of the poisoning and the

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clinical response, a second dose of 5 g may be administered by IV infusion for a total dose of 10 g. The rate of infusion for the second dose ranges from 15 minutes (for patients who are extremely unstable) to 2 hours depending on the patient's condition.

Table 4. Reconstitution

Dose per Vial	Volume of Diluent to be Added to Vial	Approximate Available Volume	Nominal Concentration per mL
2.5 g	100 mL	Approx. 100 mL	25 mg/mL
5 g	200 mL	Approx. 200 mL	25 mg/mL

2.5g Vial: Each 2.5 g vial is to be reconstituted with 100 mL of diluent using the supplied sterile transfer device. Sodium chloride 9 mg/mL (0.9%) solution for injection is the recommended diluent. Only when sodium chloride 9 mg/mL (0.9%) solution for injection is not available, Lactated Ringer solution or 5% glucose can also be used. The Cyanokit® 2.5 g vial is to be rocked or inverted for at least 30 seconds to mix the solution. It must not be shaken as shaking the vial may cause foam and therefore may make checking reconstitution less easy.

5 g Vial: Each 5 g vial is to be reconstituted with 200 mL of diluent using the supplied sterile transfer device. Sodium chloride 9 mg/mL (0.9%) solution for injection is the recommended diluent. Only when sodium chloride 9 mg/mL (0.9%) solution for injection is not available, Lactated Ringer solution or 5% glucose can also be used. The Cyanokit® 5 g vial is to be rocked or inverted for at least 60 seconds to mix the solution. It must not be shaken as shaking the vial may cause foam and therefore may make checking reconstitution less easy. Because the reconstituted solution is a dark red solution, some insoluble particles may not be seen. The intravenous infusion set provided in the kit must therefore be used as it includes an appropriate filter and is to be primed with the reconstituted solution. Repeat this procedure if necessary with the second vial.

Incompatibility Information: Physical incompatibility (particle formation) and chemical incompatibility were observed with the mixture of hydroxocobalamin in solution with selected drugs that are frequently used in resuscitation efforts. Hydroxocobalamin is also chemically incompatible with sodium thiosulfate and sodium nitrite and has been reported to be incompatible with ascorbic acid. Therefore, these and other drugs must not be administered simultaneously through the same IV line as hydroxocobalamin. Simultaneous administration of hydroxocobalamin and blood products (whole blood, packed red cells, platelet concentrate and/or fresh frozen plasma) through the same IV line is not recommended. However, blood products and hydroxocobalamin can be administered simultaneously using separate IV lines (preferably on contralateral extremities, if peripheral lines are being used).

Storage of Reconstituted Drug Product: Once reconstituted, hydroxocobalamin is stable for up to 6 hours at a temperature between 2°C and 40°C (35.6°F and 104°F). Do not freeze. Any reconstituted product not used by 6 hours should be discarded.

Supplemental Product Information

ADVERSE REACTIONS: Systematic collection of adverse events was not done in all clinical studies involving known or suspected cyanide-poisoning victims who were treated with hydroxocobalamin. The interpretation of causality in these studies is limited due to lack of a control group and due to circumstances of administration (e.g., use in fire victims).

Clinical Trial Adverse Drug Reactions: *Because clinical trials are conducted under very specific conditions the adverse reaction rates observed in the clinical trials may not reflect the rates observed in practice and should not be compared to the rates in the clinical trials of another drug. Adverse drug reaction information from clinical trials is useful for identifying drug-related adverse events and for approximating rates.*

Experience in Healthy Subjects: A double-blind, randomized, placebo-controlled, single-ascending dose (2.5, 5, 7.5, and 10 g) study was conducted to assess the safety, tolerability, and pharmacokinetics of hydroxocobalamin in 136 healthy adult subjects. Because of the dark red colour of hydroxocobalamin, the two most frequently occurring adverse reactions were chromaturia (red-coloured urine) which was reported in all subjects receiving a 5 g dose or greater; and erythema (skin redness), which occurred in most subjects receiving a 5 g dose or greater. Adverse reactions reported in at least 1% of the 5 g dose group and corresponding rates in the 10 g and placebo groups are shown in Table 5.

Table 5. Incidence of Adverse Reactions Occurring in ≥ 1% of Healthy Subjects in 5 g Dose Group and Corresponding Incidence in 10 g Dose Group and Placebo

	5 g Dose Group		10 g Dose Group	
	Hydroxo-cobalamin	Placebo	Hydroxo-cobalamin	Placebo
	N = 66	N = 22	N = 18	N = 6
Adverse Drug Reaction	n (%)	n (%)	n (%)	n (%)
Eye disorder				
Eye redness	2 (3)	0	1 (6)	0
Renal and Urinary Disorders				
Chromaturia (red coloured urine)	66 (100)	0	18 (100)	0
Pollakiuria (frequent urination)	1 (2)	0	0	0
Skin and subcutaneous tissue Disorders				
Erythema	62 (94)	0	18 (100)	0
Rash*	14 (21)	0	3 (17)	0
Immune Disorders				
Face edema	1 (2)	0	0	0
Pruritus	1 (2)	0	3 (17)	0
Urticaria	1 (2)	0	0	0
Investigations				
Blood amylase increased	1 (2)	0	0	0
Blood pressure increased	12 (18)	0	5 (28)	0
Lymphocyte percent decreased	5 (8)	0	3 (17)	0
Gastrointestinal disorders				
Abdominal discomfort	2 (3)	0	2 (11)	0
Flatulence	1 (2)	0	0	0
Loose stools	1 (2)	0	0	0
Nausea	4 (6)	1 (5)	2 (11)	0
Vomiting	2 (3)	0	0	0
Nervous System Disorders				
Dizziness	2 (3)	0	1 (6)	0
Headache	4 (6)	1 (5)	6 (33)	0
General disorders and administrative site conditions				
Chest discomfort	3 (5)	0	2 (11)	0
Discomfort	1 (2)	0	0	0
Feeling hot and/or cold	2 (3)	0	0	0
Infusion site reaction	4 (6)	0	7 (39)	0
Musculoskeletal and connective tissue disorders				
Joint/back pain	2 (3)	0	0	0
Psychiatric disorders				
Restlessness	2 (3)	0	0	0
Respiratory, thoracic and mediastinal disorders				
Dyspnea	1 (2)	0	0	0
Sore or dry throat	3 (5)	0	3 (17)	0

* Rashes were predominately acneiform

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Less Common Adverse Drug Reactions Occurring at a rate of less than 1%

Eye disorders: Swelling, irritation.

Gastrointestinal disorders: Dyspepsia, diarrhea, dysphagia, hematochezia.

General disorders and administration site conditions: Peripheral edema.

Immune system disorders: Allergic reactions including angioneurotic edema and skin eruption (see **WARNINGS AND PRECAUTIONS**).

Nervous system disorders: Memory impairment.

Respiratory, thoracic and mediastinal disorders: Pleural effusion.

Vascular disorders: Hot flush.

Experience in Known and Suspected Poison Victims: Four open-label, uncontrolled, clinical studies (one of which was prospective and three of which were retrospective) were conducted in known or suspected cyanide-poisoning victims. A total of 245 patients received hydroxocobalamin treatment in these studies. Systematic collection of adverse events was not done in all of these studies and interpretation of causality is limited due to the lack of a control group and due to circumstances of administration (e.g., use in fire victims). Adverse reactions reported in these studies listed by system organ class included:

Cardiac disorders: Ventricular extrasystoles, an increase in heart rates, electrocardiogram repolarization abnormality.

Adverse reactions common to both the studies in known or suspected cyanide poisoning victims and the study in healthy volunteers are listed in the healthy volunteer section of the Product Monograph only and are not duplicated in this list.

Abnormal Hematologic and Clinical Chemistry Findings: Cyanokit® may cause red discolouration of the plasma, which may cause artificial elevation or reduction in the levels of certain laboratory parameters (see **WARNINGS AND PRECAUTIONS**). White blood cell counts (WBC) showed a slight and transient increase in mean values from baseline at 2 to 12 hours after treatment in healthy subjects, and small decreases in serum sodium levels were also observed. Changed values generally remained within normal ranges. Other minor and transient changes in hematology and clinical chemistry findings were considered due to interference by hydroxocobalamin or due to individual variation.

DRUG INTERACTIONS: Drug-Herb Interactions: Interactions with herbal products have not been established.

Drug-Laboratory Interactions: Because of its deep red colour, hydroxocobalamin has been found to interfere with colourimetric determination of certain laboratory parameters (e.g., clinical chemistry, hematology, coagulation, and urine parameters). In vitro tests indicated that the extent and duration of the interference are dependent on numerous factors such as the dose of hydroxocobalamin, analyte, methodology, analyzer, hydroxocobalamin concentration, and partially on the time between sampling and measurement. Based on in vitro studies and pharmacokinetic data obtained in healthy volunteers, Table 2 describes laboratory interference that may be observed following a 5 g dose of hydroxocobalamin (see **WARNINGS AND PRECAUTIONS**). Interference following a 10 g dose can be expected to last up to an additional 24 hours. The extent and duration of interference in cyanide-poisoned patients may differ. Results may vary substantially from one analyzer to another; therefore, caution should be used when reporting and interpreting laboratory results.

OVERDOSAGE:

For management of a suspected drug overdose, contact your Regional Poison Control Centre.

Limited data are available about overdose with Cyanokit® Doses as high as 15 g have been administered without reported specific dose related adverse reactions. If overdose occurs, treatment is directed to the management of symptoms. Hemodialysis may be effective in such a circumstance, but is only indicated in the event of significant hydroxocobalamin-related toxicity. Because of its deep red colour, hydroxocobalamin may interfere with the performance of hemodialysis machines (see **WARNINGS AND PRECAUTIONS**, Monitoring and Laboratory Tests).

Product Monograph available on request.

References: 1. CYANOKIT® (Hydroxocobalamin) Product Monograph, EMD Serono, October, 2011.

Member PAAB R&D

Importer & Distributor of Cyanokit®:
EMD Serono, A Division of EMD Inc., Canada
2695 North Sheridan Way, Suite 200
Mississauga, Ontario L5K 2N6 Canada
www.emdserono.ca
An affiliate of Merck KGaA, Darmstadt, Germany

EMD Serono

EMD

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See prescribing summary on page A9

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Photographic Documentation in the ED

CAEP | Canadian Association of Emergency Physicians
ACMU | Association canadienne des médecins d'urgence

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Call for Abstract Submissions
CAEP Annual Conference
May 31 – June 4, 2014

The CAEP Research and 2014 Conference Organizing Committees are dedicated to ensuring that research presentations receive the highest profile. As such, abstracts should represent original research that has not been previously accepted or published in full (i.e. abstracts can be published but full manuscripts cannot be).

Abstracts are submitted electronically starting **Friday, November 8, 2013 at 09:00 EST.**
The deadline for submission is on or before **Monday, January 6, 2014, 23:59 MST**.

INSTRUCTIONS FOR ABSTRACTS

Full submission instructions will are posted on the submission site and the CAEP Research page.
Abstract submissions are done via http://caep2014researchcompetitions.abstractcentral.com

Abstracts will:

- Have an Introduction, Methods, Results, Conclusions, and Keywords section
- Clearly identify the name and email of the primary author (must also be listed first in the author list) and name of presenting author, if different from that of the primary author
- Provide the institutional affiliation, city and province of the primary author only

ADDITIONAL INFORMATION

- Abstracts may be submitted on behalf of the primary author BUT the primary author's details must be provided, not those of the submitter
- New — All communication upon acceptance will be with the primary author, not the submitter and must be correct at the time of submission
- Successful abstract submitters are responsible for their own expenses and conference registration

Graphs or tables in any format will NOT be accepted. Abbreviations should be defined when first used, but kept to a minimum.

ABSTRACT REVIEW PROCESS

Abstracts are peer reviewed by 3 CAEP Abstract Reviewers using a standardized evaluation form. Reviewers are blinded to the authors' name(s) and institutional affiliation(s). Reviewers will not review abstracts from their own province and strict conflict of interest declarations are provided to each reviewer. Abstracts will be selected for oral or poster presentation.
Notification of acceptance will be transmitted via email no later than **March 7, 2014**.
Accepted original abstracts will be published in *CJEM.*

PRESENTATION FORMATS AND TIME FRAMES

Orals	10 minutes for presentation, 5 minutes for discussion	Posters	<5 minutes for presentation
Lightening Orals	5 minutes for presentation, 3 minutes for discussion	Moderated Posters	5 minutes for presentation, 3 minutes for discussion

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CAEP Resident Research Abstract Competition (CAEP Resident members only)

CAEP | Canadian Association of Emergency Physicians
ACMU | Association canadienne des médecins d'urgence

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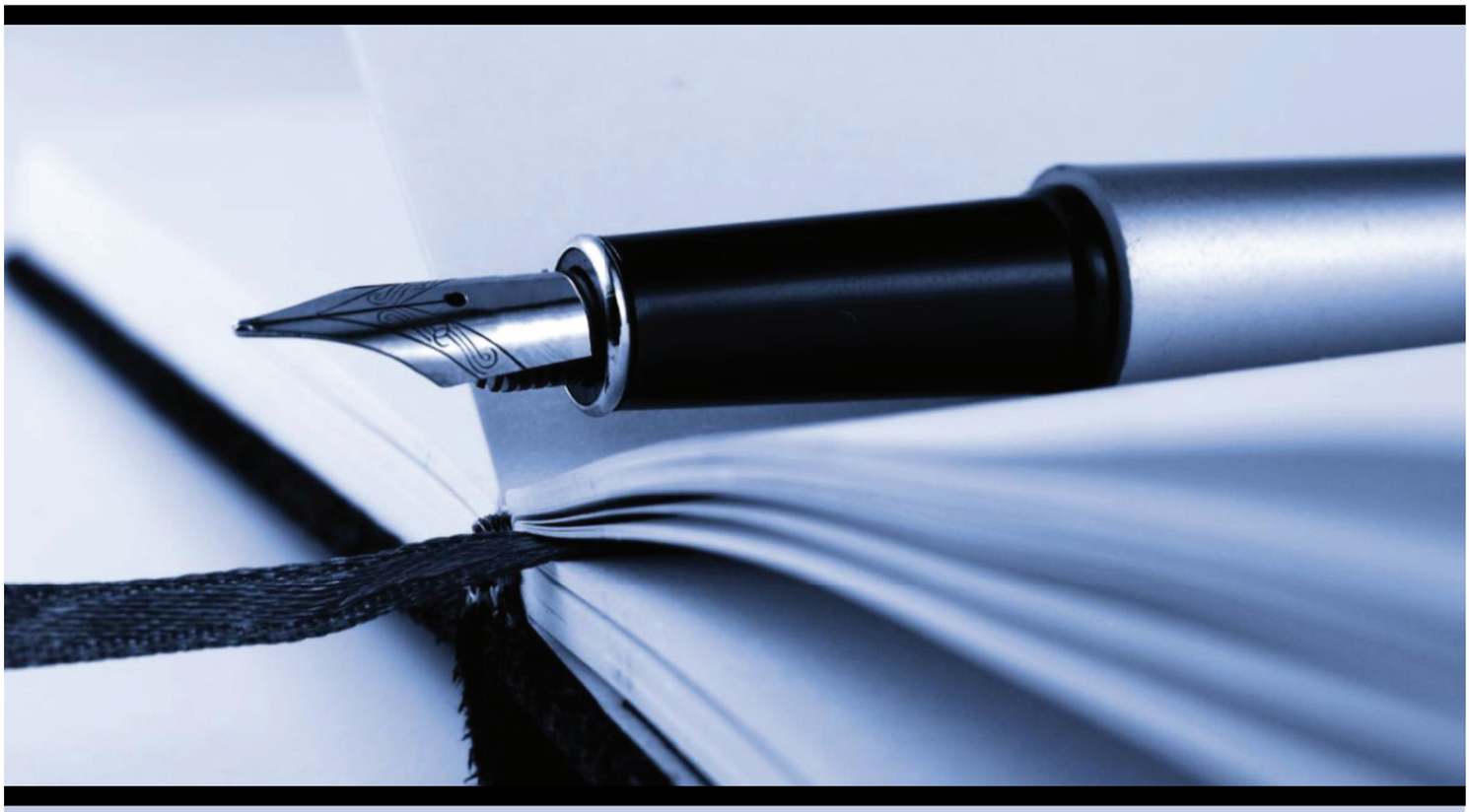
The Penelope Gray-Allan Memorial CJEM Writing Award

Call for Papers



Key Criteria

- The writing award is open to any RCPSC or CFPC Emergency Medicine resident in Canada.
- The prize will be awarded for a Humanities in Emergency Medicine article.
- The paper should be less than 1000 words excluding references.

What's at Stake

- The winning paper will be published in the CAEP Annual Conference edition of CJEM.
- The author of the winning paper will receive airfare to the 2014 CAEP conference in Ottawa, conference registration, and 2 nights of hotel accommodations.
- The author of the winning paper will receive a plaque acknowledging him/her as the recipient of the annual Penelope Gray-Allan Memorial CJEM Writing Award at the CAEP awards ceremony at the 2014 CAEP Conference.

Papers may be submitted at: http://mc.manuscriptcentral.com:80/cjem
Submissions are due by January 1, 2014.

View all award details at: ***http://caep.ca/PGA-CJEM-Writing-Award-Call-for-Papers***
Please address any questions to **cjem@rogers.com**

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