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A HAEMONETICS® COMPANY

BASIC GUIDE TO TEG® INTERPRETATION

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Cardiac Protocol

All samples are kaolin activated

Sample No.	When	Cup Type	Why Do It?
1	On induction	• Plain (clear) cup and pin If heparin suspected use heparinase bonded (blue) cup and pin as part of a split sample	Gives baseline haemostatic profile
2	Re-Warmed (approx 36ºC) (2)	• Heparinase bonded cup and pin (blue)	Early identification of any coagulopathy that starts to develop during bypass
3	10 mins post protamine	Split sample: • Plain (clear) cup and pin • Heparinase bonded cup and pin (blue)	1. Checks heparin reversal 2. Gives post bypass haemostatic profile – identifies cause of coagulopathy in bleeding patient (see suggested treatment protocol)
4	Post op ITU – if indicated	Split sample: • Plain (clear) cup and pin • Heparinase bonded cup and pin (blue)	1. If it is indicated by a developing coagulopahy profile seen in samples 1-3 2. If patient is bleeding or 'going off' clinically

NB

1. When using two cups ensure Plain cup is on the left of the heparinase cup
2. This is the point the patient comes off the pump/ end of last anastomosis in off pump case.

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Suggested Treatment Protocol

For kaolin activated samples

TEG® Values	Clinical Cause	Suggested Treatment
R between 11 – 14 min (2)	↓↓ clotting factors	X2 FFP or 8ml/kg
R greater than 14 min (2)	↓↓↓ clotting factors	X4 FFP or 16 ml/kg
MA between 42 – 47mm G between 3.6 – 4.4 K (3)	↓ platelet function	X 1 Platelet Pool
MA < 42 mm G less than 3.6K (3)	↓↓ platelet function	X 2 Platelet Pools
LY30 at 7.5% or greater, with CI less than 1.0	Primary fibrinolysis	Antifibrinolytic of choice
LY30 at 7.5% or greater, with CI greater than 3.0	Secondary fibrinolysis	Anticoagulant of choice
R less than 3 min MA greater than 75mm G greater than 15K	Prothrombotic state	Anticoagulant of choice

NB

1. Blood product and antifibrinolytic treatment is only suggested if your patient is bleeding at a level you wish to treat
2. These guidelines apply after you have ruled out heparin as a cause for the long R time
3. A normal kaolin activated MA does not rule out platelet inhibitor effects. If the patient is/was on antiplatelet agents PlateletMapping™ results should be used to assess platelet function and hence need for treatment with platelets

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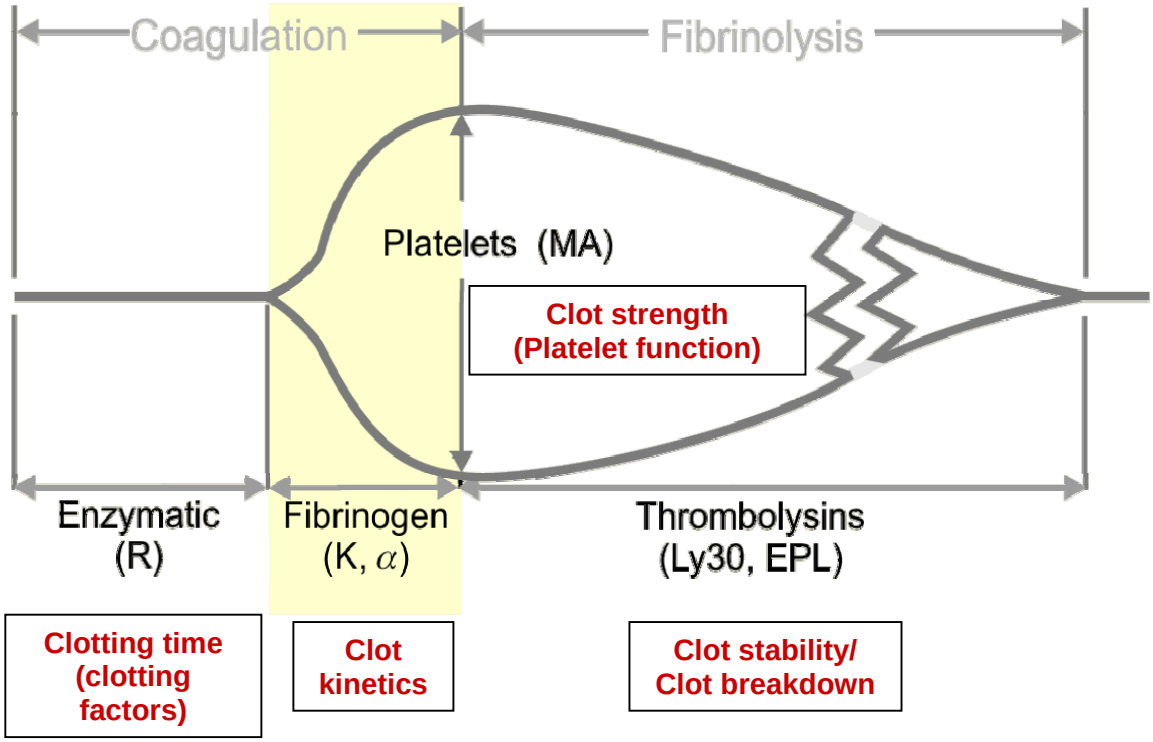
What Does TEG® Report?



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TEG® Parameter Definitions

- R = Reaction time
  - The reaction time is the time from when the blood was placed in the TEG® analyser until the initial fibrin formation ie how long it takes for the blood to start to clot, and is therefore a measure of clotting factors
- K = Kinetic time
  - The K time is a measure of the speed taken to reach a specific level of clot strength. Together with the alpha angle it is a measure of clot kinetics
- Alpha Angle
  - Measures the speed of fibrin build-up and cross-linking (clot strengthening)
- MA = Maximum Amplitude
  - The maximum amplitude represents the ultimate strength of the clot and is a measure of platelet function. It is a direct function of the maximum dynamic properties of fibrin and platelet bonding via GPIIb/IIIa.
- LY30 = Lysis 30 minutes after MA
  - It shows any breakdown of the clot and therefore gives an idea of clot stability

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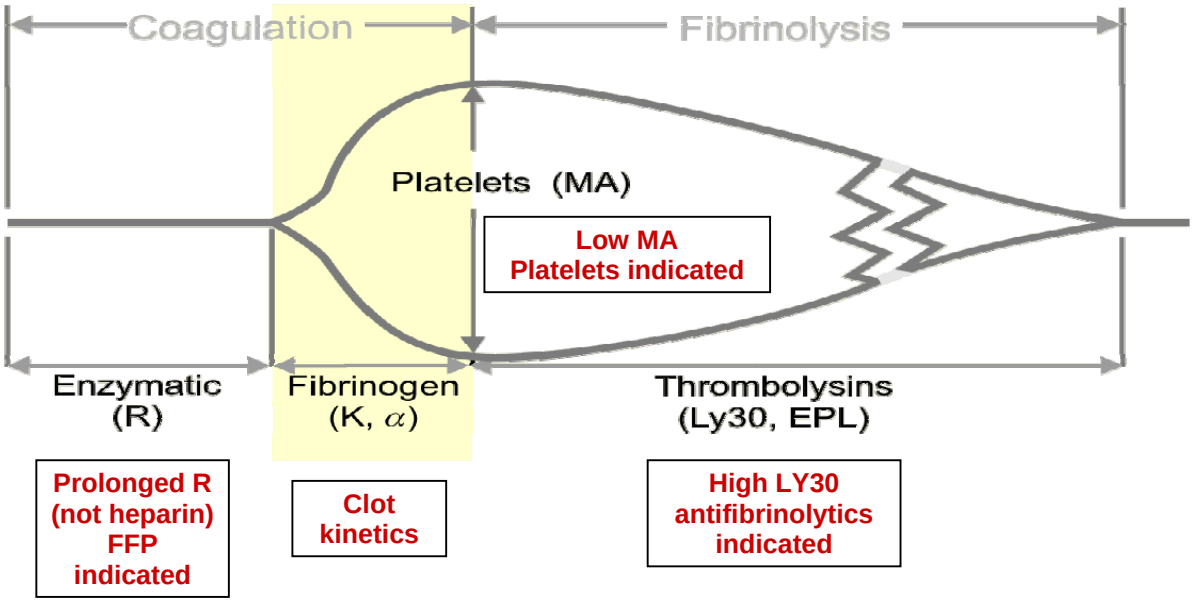
TEG®® Directed Therapy For Bleeding Patient



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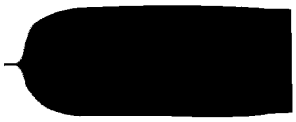
Qualitative Analysis

Normal

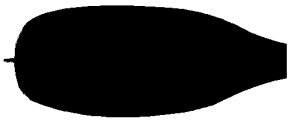
Coagulopathy/anticoagulants
Long R time

Reduced platelet function
Low MA

Primary fibrinolysis
High LY30



Hypercoagulable
Short R time, High MA



DIC
Stage 1 – hypercoagulable state with secondary fibrinolysis

DIC
Stage 2 – hypocoagulable state

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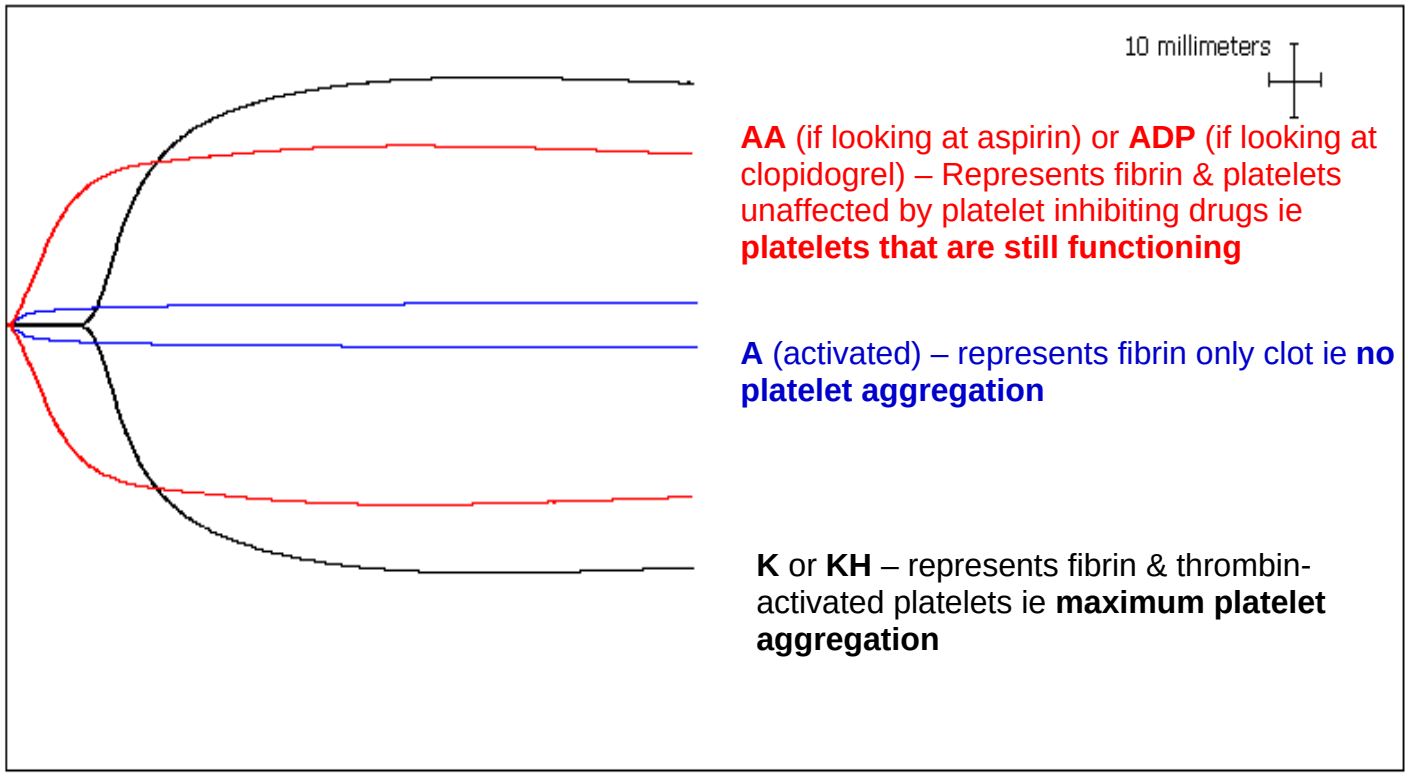
PlateletMapping™

There is a kit for monitoring the effect of platelet inhibiting drugs such as aspirin and clopidogrel.



The traces run for a maximum of 20 minutes. Overlaying the traces causes the software to calculate and display % inhibition and % function.

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What To Look For In An Etest

- Numbers in min/max are changing
- Final value 1800 – 2300
- Message etest ok
- If message is ‘not at equilibrium’ – retry
- If message is ‘etest is off centre/out of range’ – can be tweaked with trimmer tool – report to Site Administrator

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