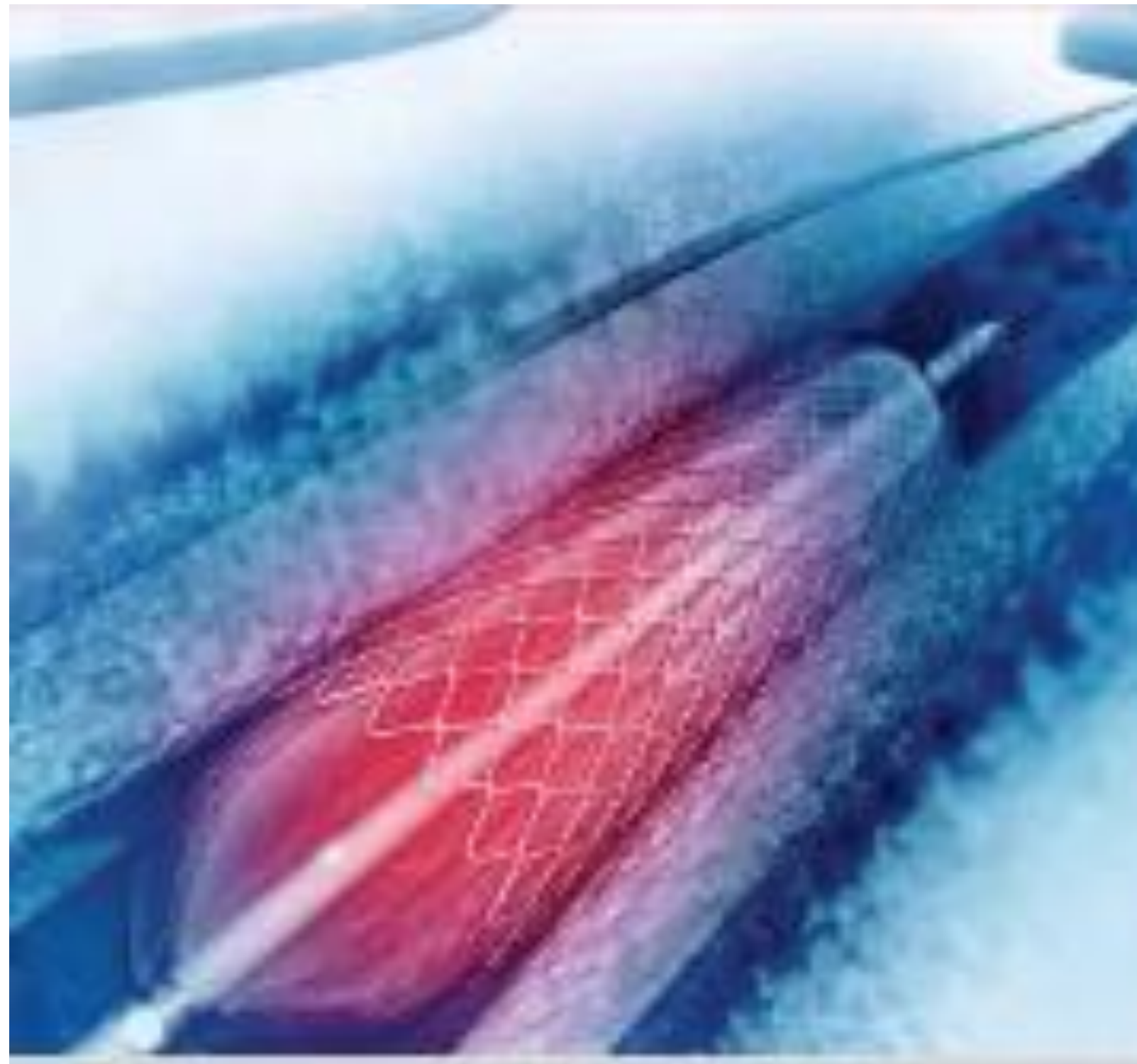




ACTIVITES SPORTIVES EN POST IDM

Yannick Samafundu
Cardiologue, MD.

Plan



01

SPORT ET SCA :
LE PARADOXE

02

LES ECUEILS

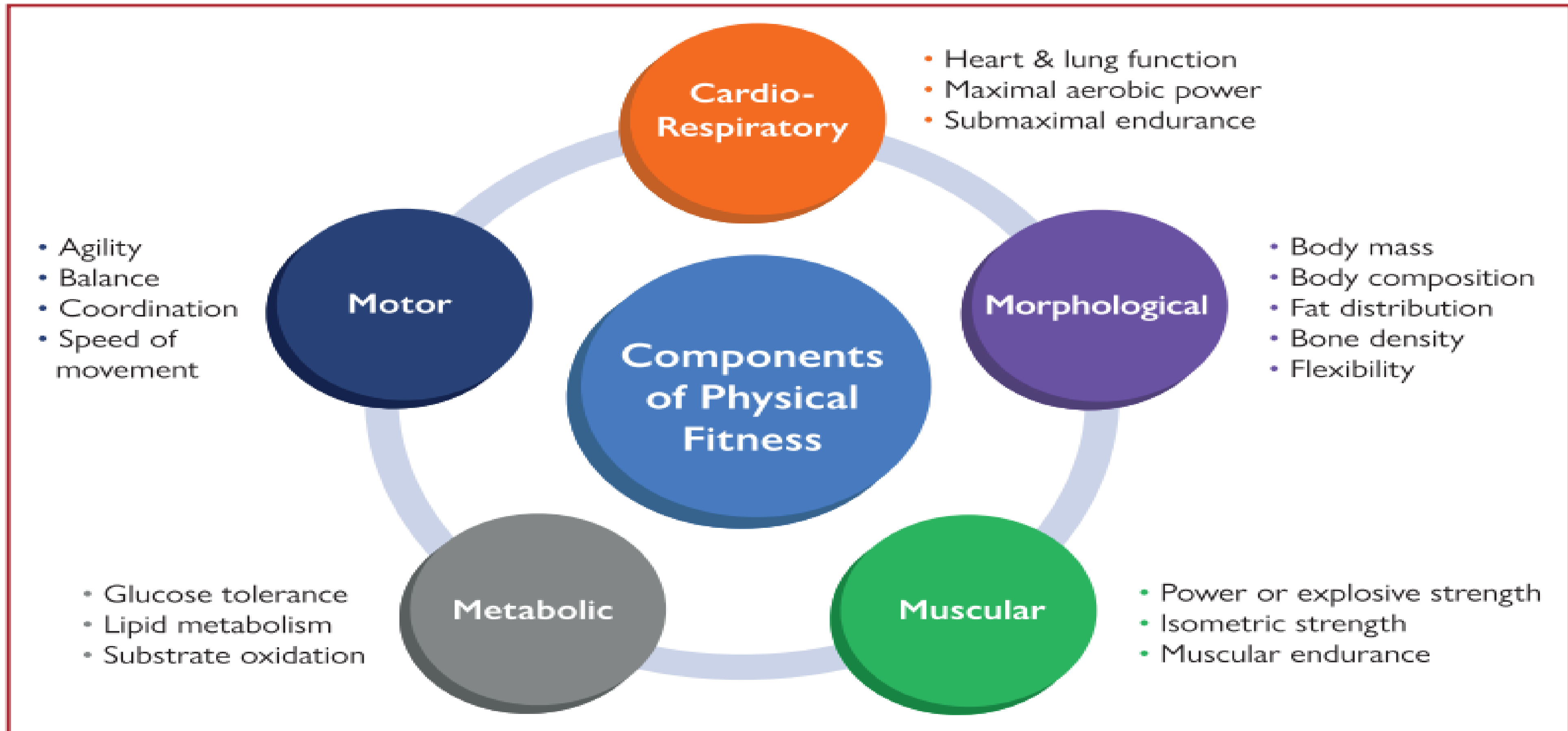
03

RECOMMANDATIONS, EN
PRATIQUE

Reprise ou initiation activité sportive au décours d'un SCA

Véritable challenge :

- *Sportif, patient coronarien*
- *Cardiologue*



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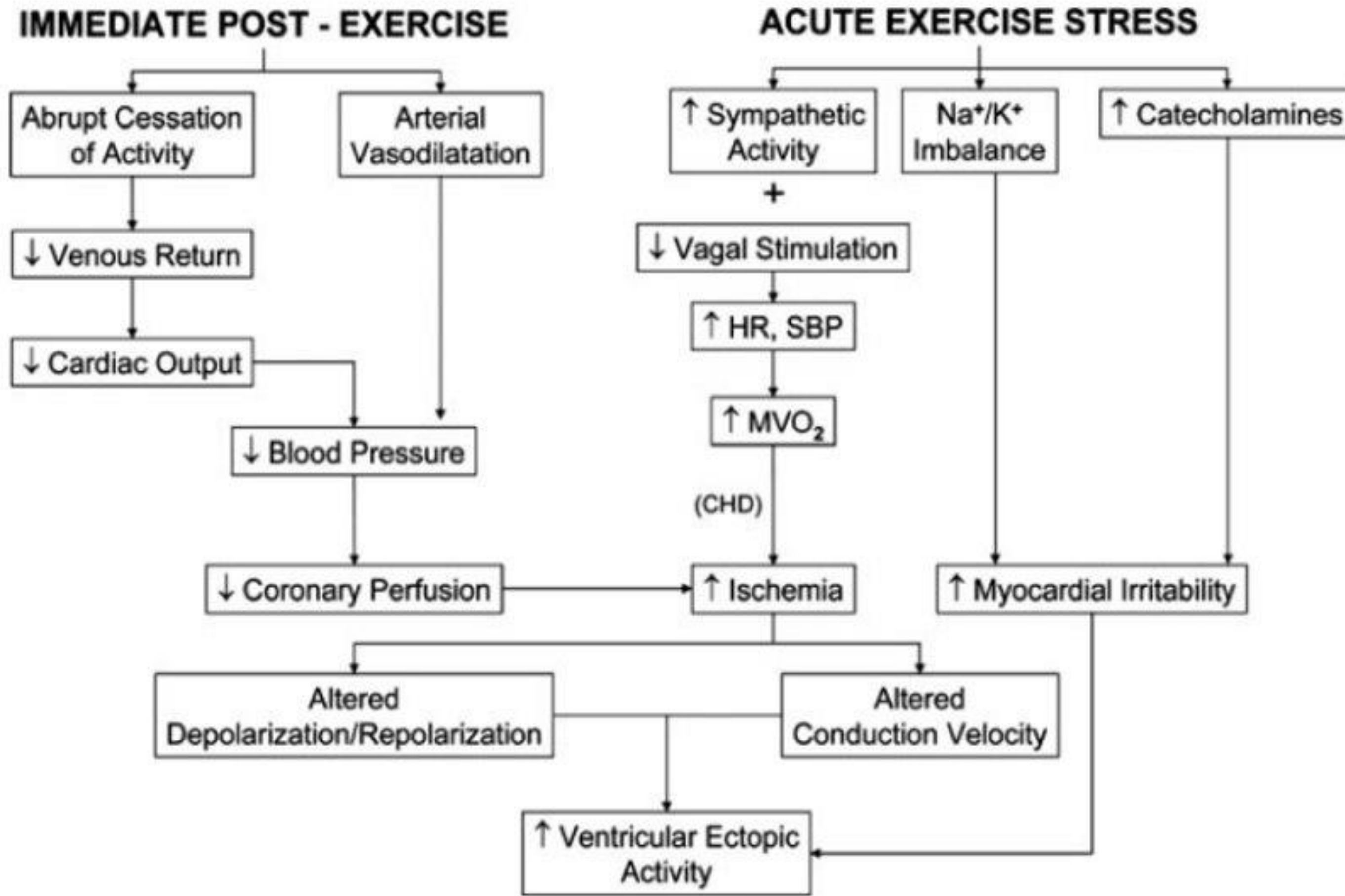
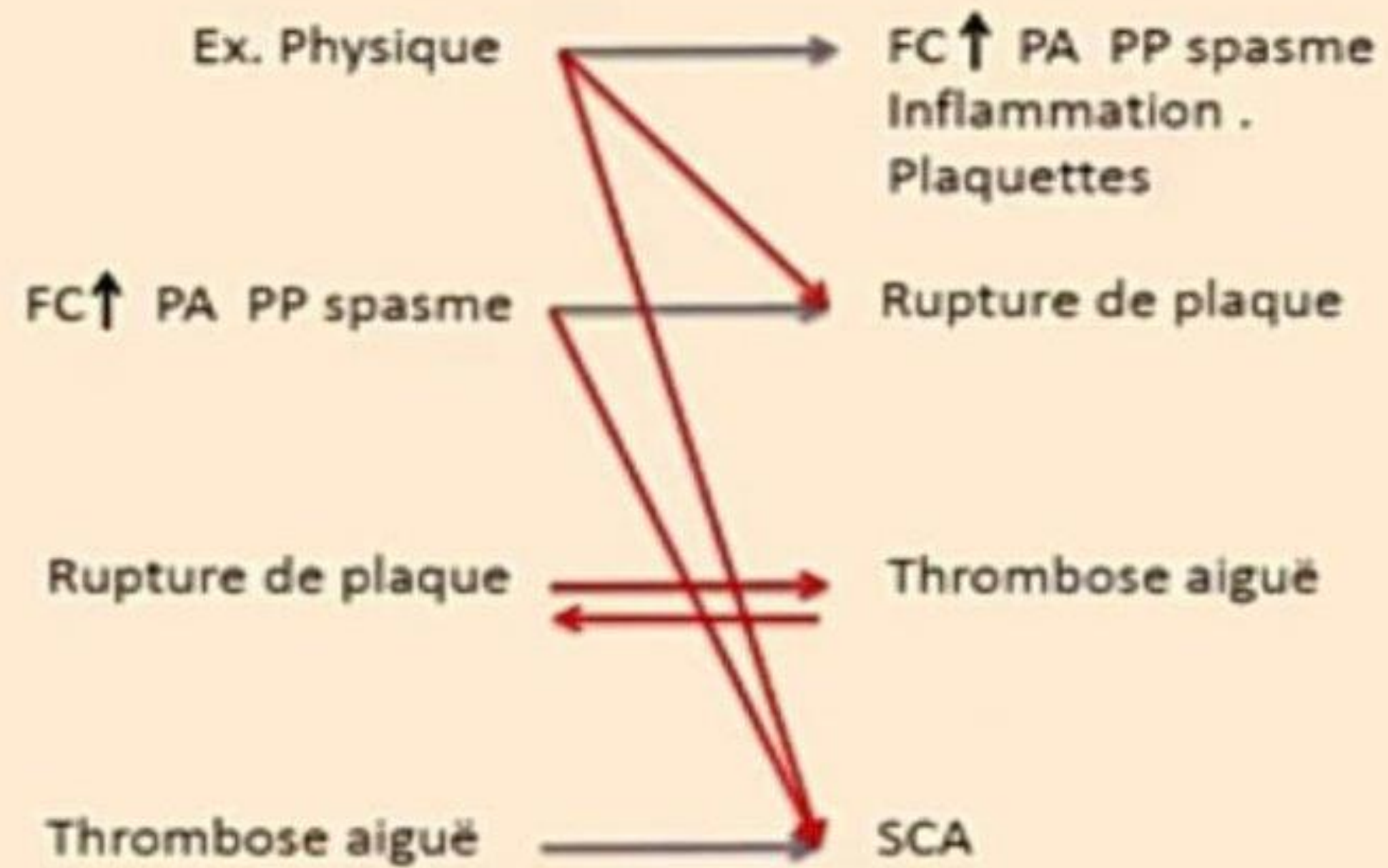


Figure 1. Physiological alterations accompanying acute exercise and recovery and their possible sequelae. HR indicates heart rate; SBP, systolic blood pressure; and MVO_2 , myocardial oxygen uptake. Reprinted from Franklin,⁷⁰ with permission.

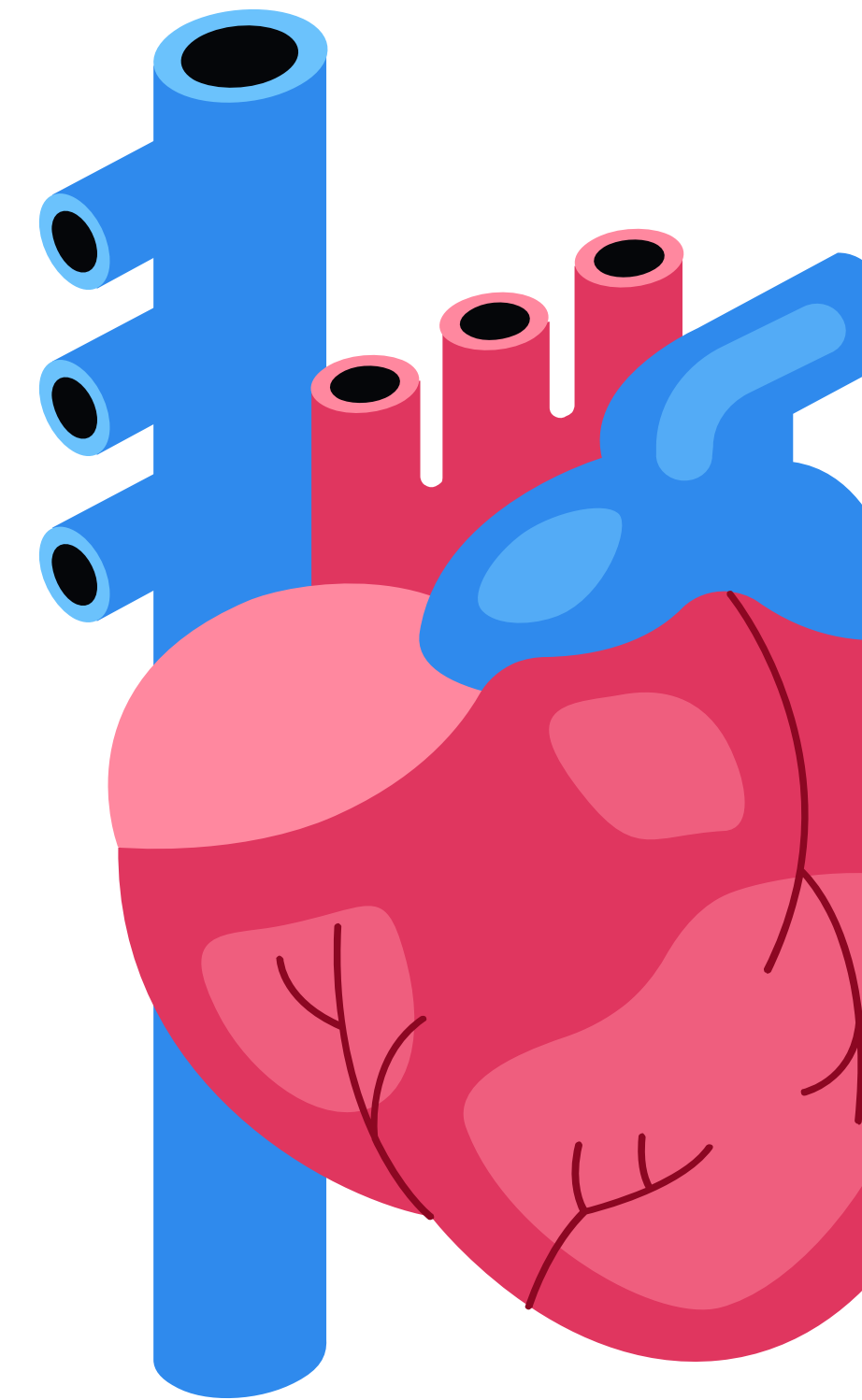


Chevalier et al. Eur J Cardiovasc Rehabil 2009
Thompson et al. Circulation 2007
Siascovick et al. NEJM 1984
Albert et al. NEJM 2000
Corrado et al. Eur Heart J 2011

Ciampricotti et al. Am Heart J 1990

Davies et al. Eur Heart J 1989
Davies et Thomas NEJM 1984
Burke et al. NEJM 1987
Virmani et al. ATVB 2000

Kannel et al. Am Heart J 1987
Benetos et al. Hypertension 1999
Diaz et al. Eur Heart J 2005
Fox et al. Lancet 2008





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CLINICAL RESEARCH

Incidence of major adverse cardiac events in men wishing to continue competitive sport following percutaneous coronary intervention

Incidence des accidents coronariens sévères chez des patients coronariens stentés pratiquants un sport en compétition

Jean-Michel Guy^a, Mathew Wilson^{b,c,d},
 Frédéric Schnell^{e,f,g}, Laurent Chevalier^h,
 Jean-Claude Verdierⁱ, Sonia Corone^j,
 Stéphane Doutreleau^{k,l}, Gaëlle Kervio^e,
 François Carré^{e,f,g,*}

Table 4 Occurrence of major adverse coronary events during a mean follow-up of 57.6 ± 46.0 months.

Event	Global population (n=108)	MLS (n=29)	ILS (n=58)	CS (n=21)	P
All MACE	17 (15.7)	5 (17.2)	7 (12.1)	5 (23.8)	0.10
Isolated SR	5 (4.6)	1 (3.5)	3 (5.2)	1 (4.8)	0.24
SR+NCS	4 (3.7)	1 (3.5)	3 (5.2)	0	0.12
ST	4 (3.7)	1 (3.5)	0	3 (14.3)	0.01
Isolated NCS	4 (3.7)	2 (6.9)	1 (1.7)	1 (4.8)	0.46

Data are expressed as number (%). The P values concern the inter-group comparison. CS: competitive sport group; ILS: intensive leisure-time sport group; MACE: major adverse cardiac events; MLS: moderate leisure-time sport group; NCS: new coronary stenosis; SR: stent restenosis; ST: stent thrombosis.

Binôme plaque traitée – stent
Evolution de la maladie coronaire
Risque rythmique

Traitement antithrombotique et
potentialisation des
complications hémorragiques.

Traitement par statine à forte dose
→myalgies et tendinopathies, ...

LES ECUEILS

Risque induit par la maladie coronaire
rupture de plaque SCA
trouble rythmique ventriculaire
AVC
mort subite

Risque induit par le traitement
thrombose de stent
risque hémorragique liés aux AAP
rhabdomyolyse sous statines

Circulation

Volume 100, Issue 13, 28 September 1999; Pages 1374-1379

<https://doi.org/10.1161/01.CIR.100.13.1374>



CLINICAL INVESTIGATION AND REPORTS

Evidence for Prothrombotic Effects of Exercise and Limited Protection by Aspirin

Nailin Li, N. Håkan Wallén, and Paul Hjerdahl

AAP ,sportif et effort



Adhésion au traitement AAP ?

Perte d'efficacité des AAP à l'effort

Li N. Circulation 1999
Perneby C Thromb Haemost 2007
Brunner S et al. Effect of Physical
Exercise
Int J Sports Med 2018

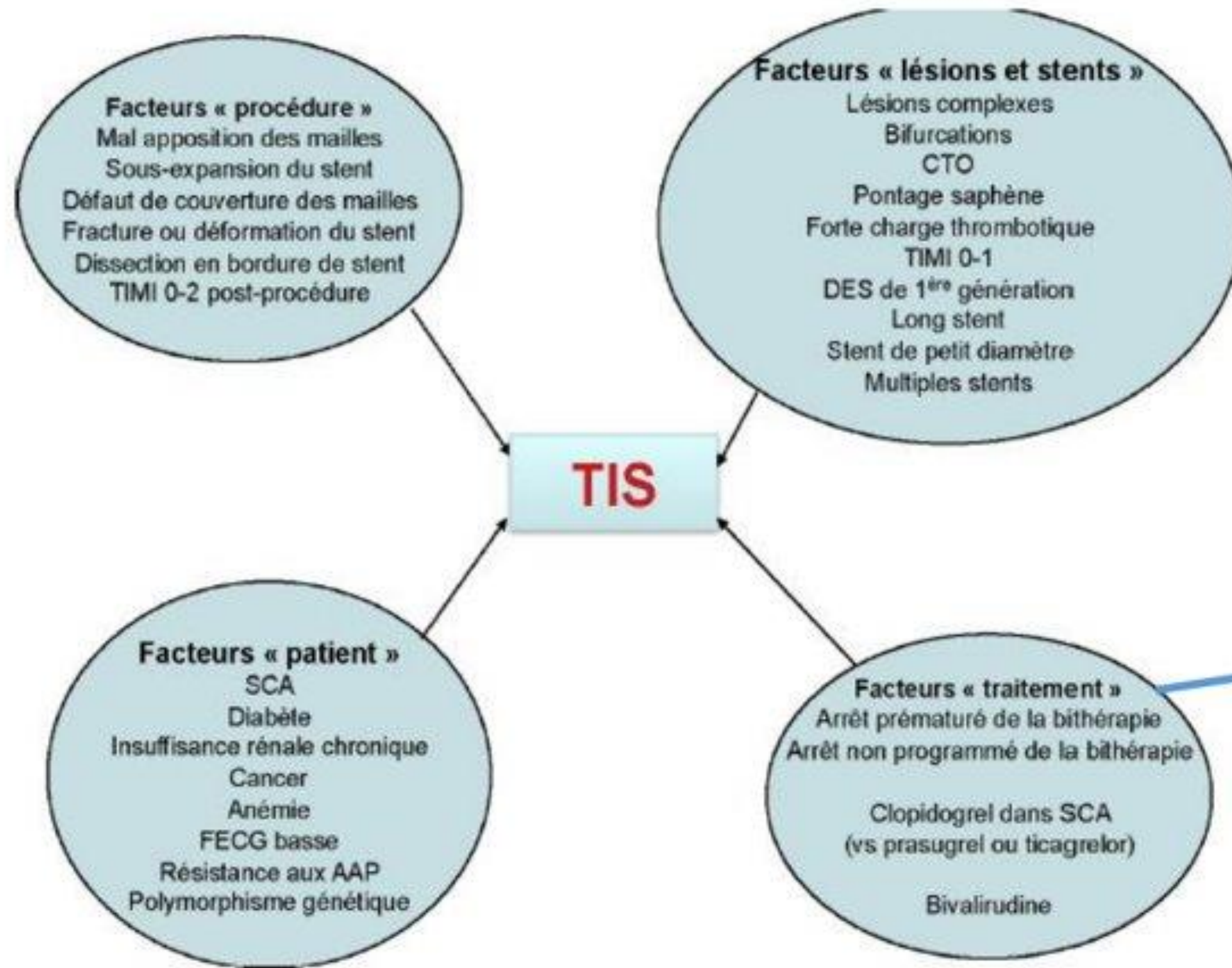


Fig. 1. Facteurs de risque de la TIS.

Stent thrombosis: what's up in 2017? R. Kallel , R. Hakim , G. Rangé

ESC Report

Recommendations for competitive sports participation in athletes with cardiovascular disease

A consensus document from the Study Group of Sports Cardiology of the Working Group of Cardiac Rehabilitation and Exercise Physiology and the Working Group of Myocardial and Pericardial Diseases of the European Society of Cardiology

Antonio Pellicani¹, Robert Page², Hans Helmer Espersen³, Aris Anastasiadis⁴, Denis Arnaud⁵, Alexander Biffi⁶, Mats Björnsen⁷, François Carré⁸, Domenico Corrado⁹, Pedro Delmar¹⁰, Lars E. Dickerson¹¹, Ash Mishra¹², Hans-Joachim Thiele¹³, Stefan Hoffmann¹⁴, Erik E. Sjöberg¹⁵, Bruce Perloff¹⁶, Angela Pisci¹⁷, Erik E. Sjöberg¹⁸, Frank van Boven¹⁹, and Luc Verheij²⁰

AHA/ACC Scientific Statement

Eligibility and Disqualification Recommendations for Competitive Athletes with Cardiovascular Abnormalities: Task Force 8: Coronary Artery Disease

A Scientific Statement from the American Heart Association and American College of Cardiology



ESC

Recommendations for participation in leisure time or competitive sports in athletes-patients with coronary artery disease: a position statement from the Sports Cardiology Section of the European Association of Preventive Cardiology (EAPC)

Mats Björnsen¹, Mikael Dahlborg², José M. Muñoz³, André LaSalle⁴, Christian Schmitt⁵, Erik E. Sjöberg⁶, Martin Müller⁷, Emilio Adamo⁸, Alexander Biffi⁹, François Carré¹⁰, Stefano Carrilho¹¹, Michael Papadimitrakis¹², Axel Preussler¹³, Marco Rasmussen¹⁴, Luis Serrano¹⁵, Sergio Sharma¹⁶, Frank van Boven¹⁷, and Antonio Pellicani¹⁸

ESC European Society of Cardiology

European Heart Journal (2021) 42, 17–76

ESC GUIDELINES

2020 ESC Guidelines on sports cardiology and exercise in patients with cardiovascular disease

The Task Force on sports cardiology and exercise in patients with cardiovascular disease of the European Society of Cardiology (ESC)

PERMISSION

Maladie coronaire et pratique sportive



ESC

European Society
of Cardiology

European Heart Journal (2018) 0, 1–8
doi:10.1093/eurheartj/ehy408



Recommendations for participation in leisure time or competitive sports in athletes-patients with coronary artery disease: a position statement from the Sports Cardiology Section of the European Association of Preventive Cardiology (EAPC)

Mats Borjesson^{1,2*}, Mikael Dellborg³, Josef Niebauer⁴, Andre LaGerche⁵, Christian Schmied⁶, Erik E. Solberg⁷, Martin Halle⁸, Emilio Adami⁹, Alessandro Biffi¹⁰, Francois Carré¹¹, Stefano Caselli^{12,13}, Michael Papadakis¹⁴, Axel Pressler¹⁵, Hanne Rasmussen¹⁶, Luis Serratos¹⁷, Sanjay Sharma¹⁸, Frank van Buuren¹⁹, and Antonio Pelliccia²⁰

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AHA/ACC SCIENTIFIC STATEMENT

Eligibility and Disqualification Recommendations for Competitive Athletes With Cardiovascular Abnormalities: Task Force 8: Coronary Artery Disease

A Scientific Statement from the American Heart Association and American College of Cardiology

Paul D. Thompson, MD, FAHA,
FACC, Chair*

Robert J. Myerburg, MD, FACC*
Benjamin D. Levine, MD, FAHA,
FACC*

James E. Udelson, MD, FAH
Richard J. Kovacs, MD, FAH

Le sport de compétition ne doit être interdit que si le risque d'accident coronarien ou d'aggravation de la pathologie coronaire est très marqué

Recommendations for return to exercise after acute coronary syndrome

Recommendations	Class ^a	Level ^b
Exercise-based cardiac rehabilitation is recommended in all individuals with CAD to reduce cardiac mortality and rehospitalization. ²³⁴	I	A
During the initial period, motivational and psychological support, and individualized recommendations on how to progress the amount and intensity of sports activities, should be considered in patients with CAD.	IIa	B
All sports activities should be considered, at an individually adapted intensity level in low-risk individuals with CCS.	IIa	C

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CAD = coronary artery disease; CCS = chronic coronary syndrome.

^aClass of recommendation.

^bLevel of evidence.

Coronaropathie et sport

Reco 2020 EAPC





FAIBLE PROBABILITE d'événement CV si et seulement si

- Revascularisation complète
- Pas de sténose critique (>70% coronaires ou >50% tronc commun)
- FEVG \geq 50%
- Capacité fonctionnelles normale de l'athlète
- Asymptomatique
- Absence d'ischémie sur un test d'effort maximal
- Absence d'arythmie ventriculaire majeure à l'effort (TVNS, ESV polymorphes et fréquentes)
- Bon équilibre des FDR CV
- Traitement médical optimal

FORTE PROBABILITE d'événement CV si au moins un de ces éléments

- Revascularisation incomplète
- Sténose critique (>70% coronaires ou >50% du tronc)
- FEVG < 50%
- Ischémie myocardique à l'effort ST ou BBG
- Symptômes précoces à faible niveau d'effort
- Lipothymies ou syncopes à l'effort
- Arythmie ventriculaire significative (TVNS, ESV polymorphes et ou très fréquentes)
- Séquelle étendue sur l'IRM
- SCA < 1 an, revascularisation < à 3 - 6 mois

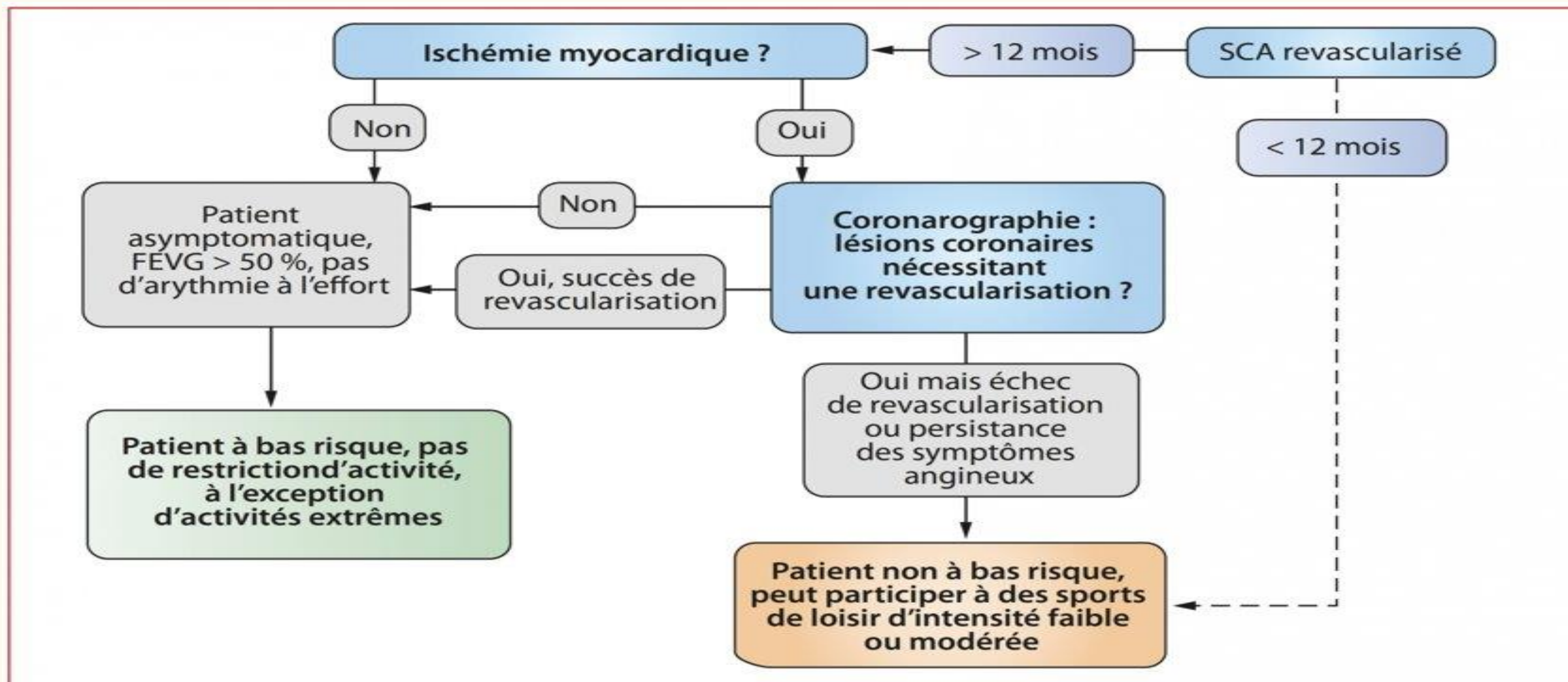
Borjesson M et. Recommendations for participation in leisure time or competitive sports in athletes-patients with coronary artery disease: a position statement from the Sports Cardiology Section of the European Association of Preventive Cardiology. Eur Heart J. 2018

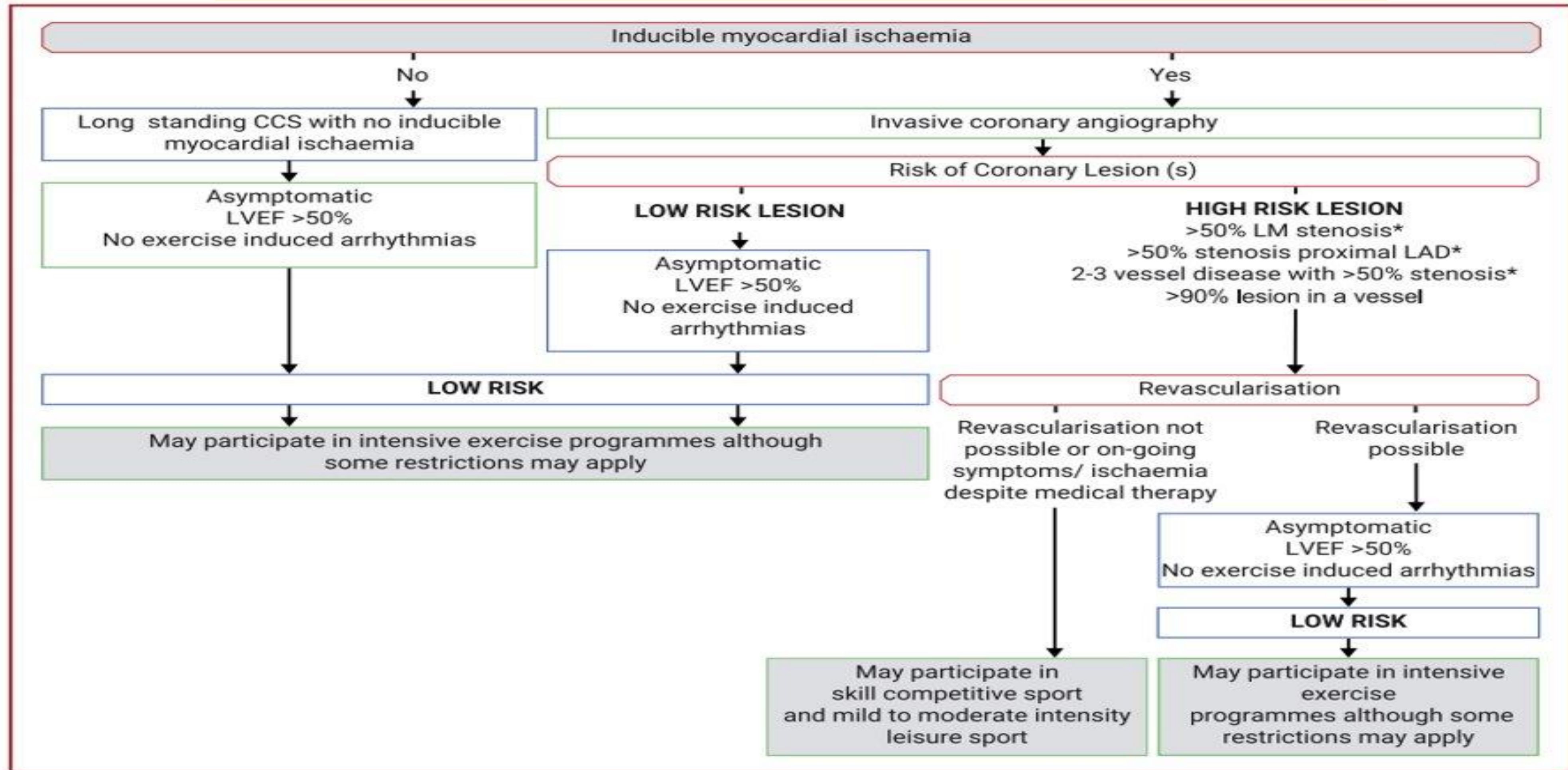
	Skill 	Power 	Mixed 	Endurance 
LOW	Golf (buggy)	Shot putting (recreational)	Soccer (adapted)	Jogging
	Golf (18 holes walking)	Discus (recreational)	Basketball (adapted)	Long distance walking
	Table tennis (double)	Alpine skiing (recreational)	Handball (adapted)	Swimming (recreational)
	Table tennis (single)	Short distance running	Volleyball	Speed walking
MEDIUM	Shooting	Shot putting	Tennis (double)	Mid/long distance running
	Curling	Discus	Ice-Hockey	Style dancing
	Bowling	Alpine skiing	Hockey	Cycling (road)
	Sailing	Judo/karate	Rugby	Mid/long distance swimming
	Yachting	Weight lifting	Fencing	Long distance skating
HIGH	Equestrian	Wrestling	Tennis (single)	Pentathlon
		Boxing	Waterpolo	Rowing
			Soccer (competitive)	Canoeing
			Basketball (competitive)	X-country skiing
		Handball (competitive)	Biathlon	
			Triathlon	

 Low intensity

 Medium intensity

 High intensity





POINTS FORTS

- Les nouvelles recommandations internationales élargissent considérablement le champ des autorisations mais ne sont pas d'une grande aide pour le cardiologue traitant.
- Gérer le stenting, la maladie athéromateuse et le risque rythmique représente un triple écueil pour le praticien.
- Le type d'examens complémentaires et le rythme de ces derniers diffèrent sensiblement de ceux appliqués aux coronariens standards.
- Chez ces patients appelés à solliciter davantage leur système cardiovasculaire, une bonne connaissance des disciplines sportives et un temps d'écoute et d'échange supérieur à la moyenne de la part du praticien apparaissent comme des atouts majeurs.

CONCLUSIONS

- Activité sportive précoce : définitivement recommandée en post SCA
- Quantifier le risque SPORT et STENT
- Responsabiliser et « contrat » expliqué.
- « ***Traiter et surveiller comme tout coronarien*** »
- Thrombose de stent est sans doute problème majeur ? Etude SCAPS 2 ...

CONCLUSIONS



- Recommandations européennes : double avantage : en phase avec la réalité et facilite l'exercice de la cardiologie du sport sur le plan médico-légal
- Insuffisantes pour le praticien : autant il était facile de tout interdire, autant il devient plus pointu de devoir accompagner et conseiller le retour au jeu.
- Être à l'écoute de son patient sportif et rester très exigeant sur le contrôle des facteurs de risque.

A blurred background image of a man in athletic wear (grey t-shirt, red shorts) looking at his phone on a paved path. The image is overlaid with a semi-transparent dark grey filter. A horizontal bar with a cyan top and yellow bottom is positioned below the text.

Merci de votre attention