Angina Pectoris is characterized by ____ due to _____ myocardial ischemia and an imbalance between oxygen demand and supply.	chest pain ,transient
The three main types of anti-anginal drugs include _____ , _____ , and ____ , all of which help to reduce cardiac work.	nitrites & nitrates, calcium channel blockers, beta blockers
In treating angina, nitrites and nitrates cause coronary ____ and decrease cardiac ___, while calcium channel blockers also provide coronary ____ and reduce cardiac work.	vasodilation, work, vasodilation
Other drugs used for angina treatment include Trimetazidine, Ranolazine, and ____ which help manage cardiac workload and improve oxygen supply.	Ivabradine
Adjuvant drugs can help prevent the conversion of_____ into ____ and include ____ drugs.	stable angina, unstable angina , anti-platelet

Statins are used even in the absence of hyperlipidemia for their effects on ____ release and ____ stabilization.	NO, atherosclerotic plaque
Treatment of risk factors such as hypertension, diabetes, and ____ is essential in managing cardiovascular health.	hyperlipidemia
Anti-platelet drugs are important in preventing unstable angina and are part of a broader strategy that includes treating ____ and ____ factors.	risk, precipitating
Organic nitrates like glyceryl trinitrate undergo extensive ____ metabolism, resulting in only ____ oral bioavailability.	hepatic, 10%
The onset of sublingual glyceryl trinitrate is between ____ to ____ minutes, while its duration is approximately ____ minutes.	10, 20, 30

The pharmacodynamic effects of nitrates include smooth muscle _____ , _____ platelet aggregation, and increased ____ levels.	relaxation, decreased , PGI 2
In the body, nitrates are denitrated by ALDH, leading to the release of ____ which activates soluble guanyl cyclase and increases ____ levels.	nitric oxide, cGMP
In pharmacological actions, venodilation leads to a decrease in ____ and ____ resulting in lower preload.	VR, EDV
Arterial dilatation causes a _____ (increase/decrease) in total peripheral resistance (TPR) and subsequently ____ afterload and blood pressure.	reduction , decreases , blood pressure
Retinal vasodilation results in an increase in ____ and can lead to ____ in the eyes.	IOP, pressure

Cutaneous vasodilation can cause a flush of the ____ and ____ due to increased flow.	face, chest
In the heart, a decrease in preload and afterload leads to a reduction in ____ consumption and ____ work.	O2, cardiac
Venodilators decrease preload, which results in lower ____ and reduced pressure on the ____ coronaries.	contractility, sub-endocardial
Arteriodilators help to lower total peripheral resistance (TPR), which subsequently decreases ____ and reduces ____ on the heart.	afterload, cardiac work
Hypotension triggers reflex sympathetic activation, causing an increase in ____ and ____ which shortens diastolic coronary perfusion time.	contractility, tachycardia

Therapeutic uses include treating all types of ____ and ____ angina pectoris.	angina, congestive heart failure
In the case of unstable angina, the treatment aims to reduce ____ work and ____ consumption.	cardiac, O2
Variant angina is treated by promoting coronary ____ and reducing ____ consumption.	vasodilation, O2
Cyanide poisoning is addressed due to its affinity for ____ in met HB, not for ____ oxidase.	iron, cytochrome
Taking rapidly-acting nitrates can lead to ____ and ____ if not careful.	postural hypotension, syncope

Tolerance to nitrates can be avoided by having a ____ to ____ hour nitrate-free period.	8, 12
Adverse effects of high doses of nitrates include ____ and ____ due to methemoglobinemia.	headache, flush
Combining nitrates with phosphodiesterase inhibitors like ____ can cause fatal ____ and tachycardia.	sildenafil, hypotension
Calcium Channel Blockers (CCBs) include Dihydropyridines (DHPs) and Non-DHPs. DHPs are known for their greater ____ than ____ depression.	vasodilation, cardiac
Among the long-acting Dihydropyridines, ____ is commonly used, while ____ and ____ are intermediate-acting options.	amlodipine, nifedipine, felodipine

The short-acting Dihydropyridines include ____ and ____, while Non-DHPs consist of ____ and ____.	isradipine, nimodipine, verapamil, diltiazem
In terms of effects, Non-DHPs like verapamil and diltiazem primarily cause ____ depression that is greater than their effect on ____.	cardiac, vasodilation
Calcium channel blockers primarily block ____-dependent L-type calcium channels in the heart and ____ vessels.	voltage, blood
The mechanism of action of calcium channel blockers includes decreasing Ca2+ influx into cardiac muscle, blood vessels, and ____ muscles.	smooth
Calcium channel blockers lead to cardiac inhibition, especially with ____ and diltiazem, and cause arteriolar ____ in blood vessels.	verapamil, vasodilation

In addition to cardiac effects, calcium channel blockers promote relaxation in smooth muscles such as those in the ____ and ____ systems.	biliary, intestinal
Verapamil and diltiazem have a negative chronotropic effect, which means they ____ the heart rate and ____ the heart's contractility.	decrease, decrease
The use of verapamil and diltiazem is contraindicated in heart failure due to their negative ____ effect and negative ____ effect.	inotropic, chronotropic
Verapamil and diltiazem are not recommended to be combined with β-blockers or digitalis because they can lead to ____ and ____ effects.	excessive, harmful
Class IV anti-arrhythmic drugs like verapamil and diltiazem reduce automaticity and decrease ____ focus formation, which helps in managing ____ arrhythmias.	ectopic, cardiac

Nifedipine and amlodipine primarily cause ____ and ____ in the cardiovascular system.	vasodilation, decreased cardiac work
The pharmacological actions of nifedipine and amlodipine lead to a decrease in ____ and ____ due to reduced total peripheral resistance.	afterload, oxygen consumption
Amlodipine has a minimal effect on ____ during reflex sympathetic activation, unlike nifedipine which can cause significant ____.	diastolic filling time, tachycardia
Both nifedipine and amlodipine act more on ____ than on ____ to reduce preload and venous return.	arteries, veins
In treating effort angina, CCBs decrease ____ consumption and ____ work to alleviate symptoms.	oxygen, cardiac

Calcium channel blockers (CCBs) are used to treat ____ and ____ by reducing cardiac work and promoting coronary vasodilation.	angina, coronary vasodilation
CCBs act as powerful arteriolar dilators, leading to a decrease in ____ and ____ afterload.	total peripheral resistance, cardiac
The negative inotropic effect of non-DHP CCBs results in a reduction of ____ and a decrease in ____ aggregation.	contractility, platelet
Calcium channel blockers (CCBs) can be used to treat ____ and ____ in patients with cardiac issues.	cardiac arrhythmia, hypertrophic obstructive cardiomyopathy
For managing hypertension, ____ CCBs are particularly effective, while ____ CCBs are used for peripheral vascular disease.	DHPs, DHPs

Nimodipine is specifically indicated for treating ____ due to subarachnoid hemorrhage and can also help with ____ headaches.	cerebral spasm, migraine
Verapamil and diltiazem are used to treat ____ obstructive cardiomyopathy with ____ stenosis.	hypertrophic, subaortic
Common adverse effects of CCBs include ____ and ____.	headache, flushing
Verapamil and diltiazem can cause ____ inotropic effects leading to ____ and ____.	negative, heart failure, bradycardia
One of the gastrointestinal side effects of CCBs, particularly with verapamil, is ____ and it can also lead to ____.	constipation, liver impairment

Ankle edema from CCBs is due to reduced ____ permeability and can be treated with ____.	capillary, elastic stocks
β - blockers are effective in treating ____ but not ____ angina pectoris.	angina pectoris, variant
The desirable effects of β - blockers include a decrease in ____ and ____ consumption.	cardiac work, O2
β - blockers help to lower heart rate (HR) and increase ____ coronary perfusion time.	diastolic
By reducing contractility, β - blockers relieve compression of the ____ coronaries.	sub-endocardial

Prolonged use of certain medications can increase the incidence of type - 2 diabetes mellitus by ____%. Additionally, they may cause ____ in susceptible patients.	50, bradycardia
In the context of angina pectoris, cardio-selective β - blockers are useful for ____ and ____, while non-selective β - blockers are contraindicated in ____ angina.	stable, unstable, variant
Sudden cessation of certain medications can lead to rebound ____ and ____ in patients, highlighting the importance of careful management.	angina, arrhythmia
Undesirable effects of some heart medications include heart block, heart failure, and an increased risk of ____ in susceptible patients, particularly after ____ use.	diabetes, prolonged
In treating angina, β-blockers can be combined with _____ and _____.	nitrates, nifedipine

Nitrates and nifedipine lead to an increase in heart rate and a decrease in _____ and _____.	diastolic filling, ejection time
For variant angina, the useful drugs include _____ and _____.	β-blockers, nitrates
In cases of angina with heart failure, the recommended treatment includes large doses of _____ and _____.	β-blockers, verapamil
Trimetazidine is known for its anti-ischemic and cytoprotective properties, which help to reduce ____ production and ____ acidosis.	lactate, intracellular
Ranolazine prevents the abnormal sustained opening of the late ____ channels and increases ____ synthesis.	Na+, ATP

One of the benefits of Trimetazidine is its ability to decrease free radical production and reduce ____ overload, which helps in cell respiration.	intracellular Ca + 2
Ranolazine does not affect heart rate or blood pressure, but it may cause adverse effects such as ____, ____, and ____.	constipation, nausea, dizziness
Ivabradine works by inhibiting the cardiac pacemaker ____ current, which controls spontaneous diastolic ____ in the SAN.	If, depolarization
The primary therapeutic use of Ivabradine is for ____ angina pectoris in adults with normal ____ rhythm.	stable, sinus
Ivabradine produces a dose-dependent reduction in ____ rate, affecting the ____ of the heart.	heart, rhythm

The mechanism of action of Ivabradine involves regulating heart rate by inhibiting the ____ current in the SAN, leading to a decrease in ____ depolarization.	If, diastolic
Adverse effects of certain treatments may include ____ and luminous phenomena such as ____ in the visual field.	Bradycardia, transient enhanced brightness
Contraindications for treatment include a resting heart rate below ____ bpm and conditions like ____ and acute heart failure.	60, sick sinus syndrome
Severe hypotension is defined as blood pressure below ____ mmHg systolic and ____ mmHg diastolic.	90, 50
Luminous phenomena are caused by the inhibition of the retinal current 'I h', which resembles the cardiac current 'I f' and results in ____ in a limited area of the visual field.	transient enhanced brightness