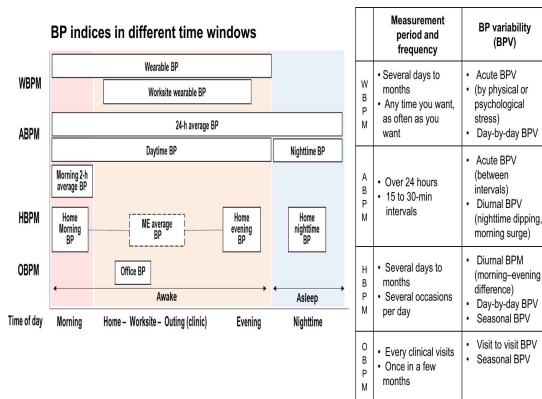


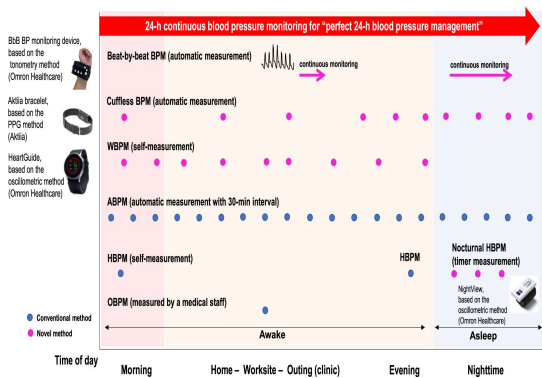
Graphical Abstract Showcase

<BP Management>

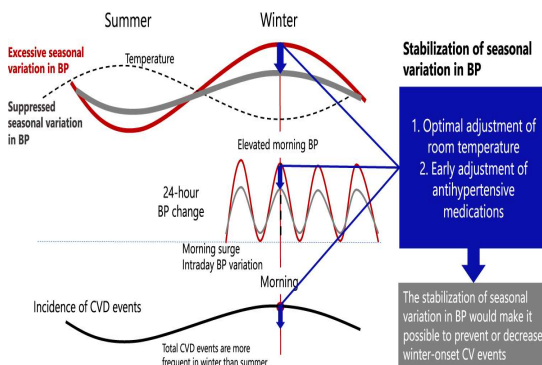


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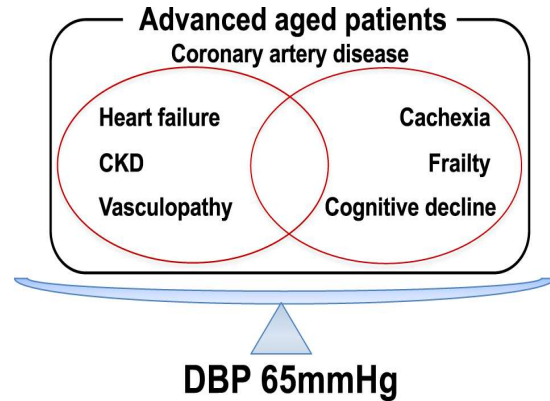
Novel and conventional blood pressure monitoring methods to measure out-of-office blood pressure



<https://doi.org/10.1038/s41440-023-01329-4>

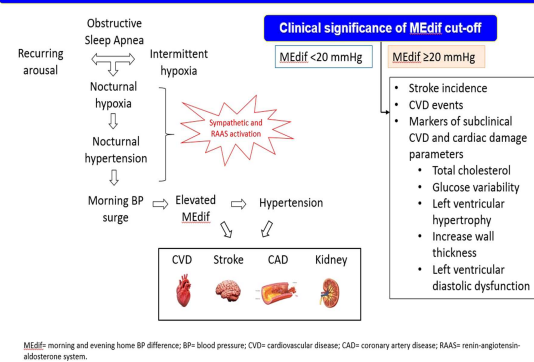


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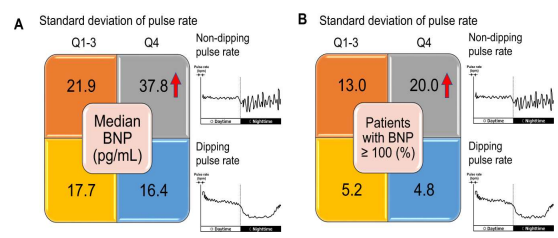


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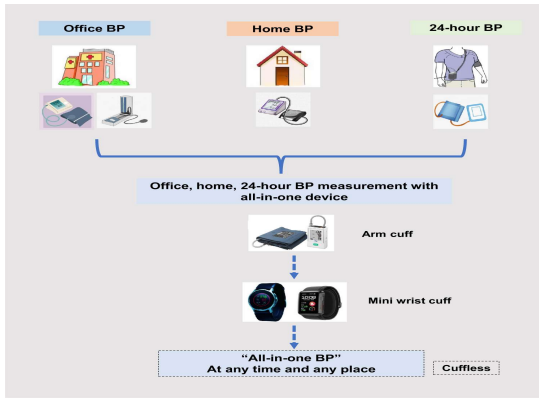
Nocturnal Hypoxia and Morning Evening Home Blood Pressure Difference (MEdif)



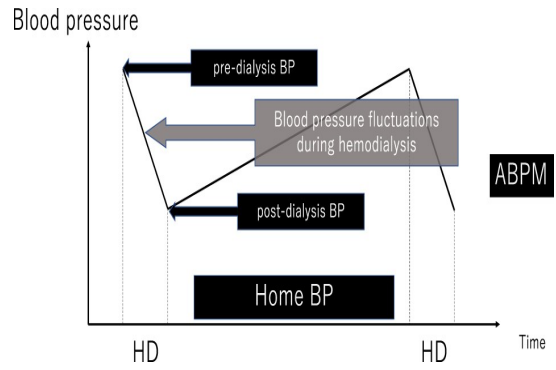
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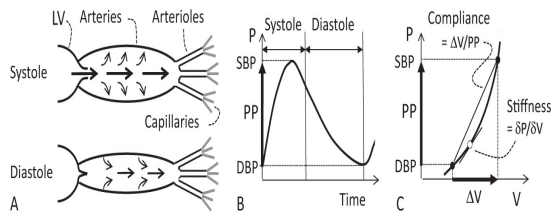
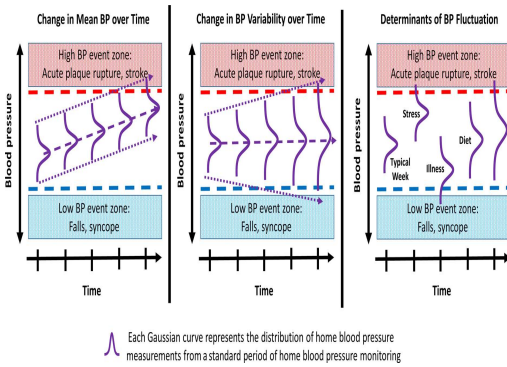
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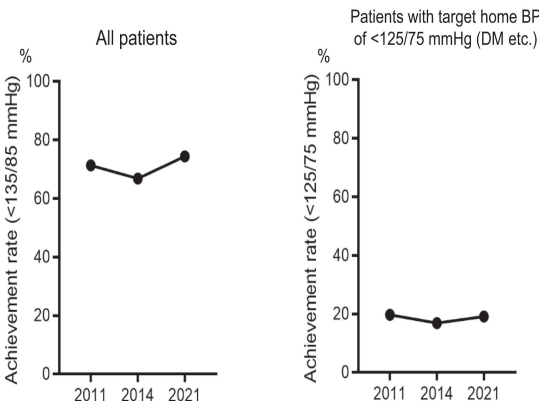


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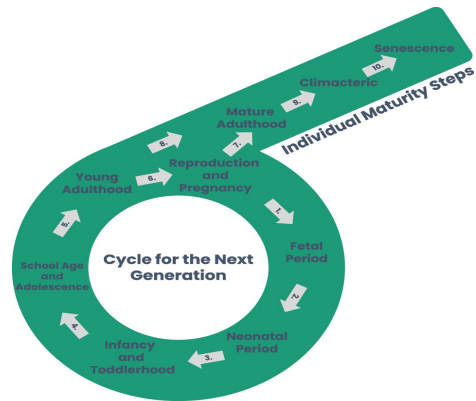
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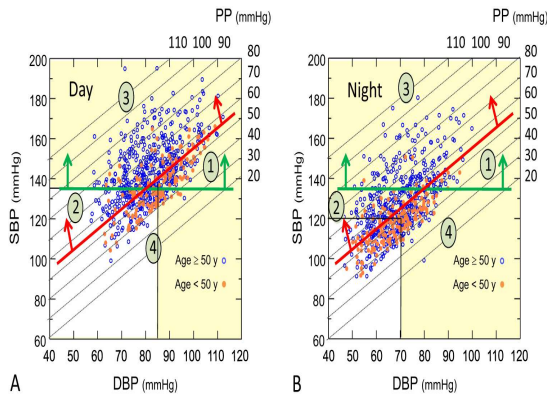
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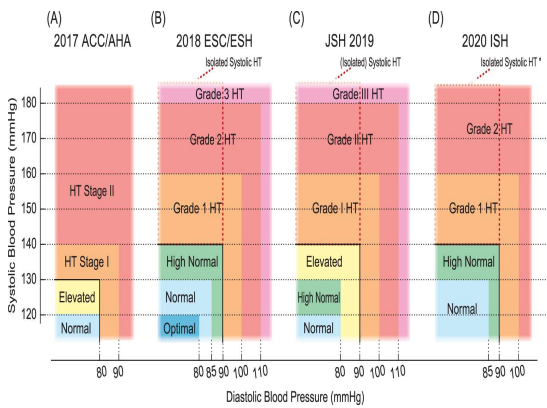
Systolic Blood Pressure
Target for CKD (eGFR < 45)

Higher Limit < 120–130 mmHg (KDIGO 2021, SPRINT, JSH 2019)

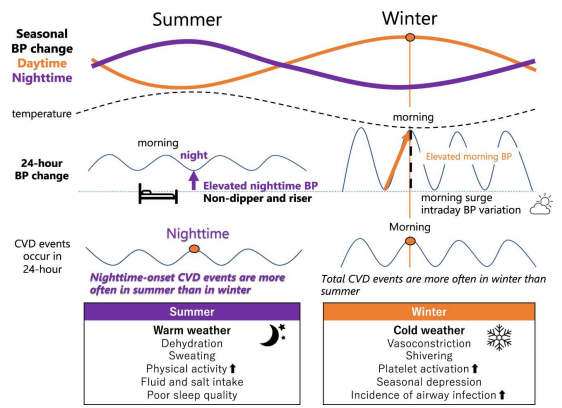


Lower Limit ? ≥ 110 mmHg (Kurasawa *et al.*)
 eGFR slope
 $+1.05 \text{ mL/min/1.73 m}^2/\text{year}$
 (vs. ≤ 100 mmHg)

<https://doi.org/10.1038/s41440-023-01427-3>

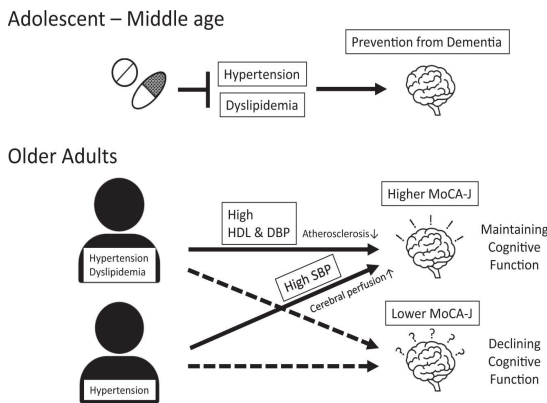


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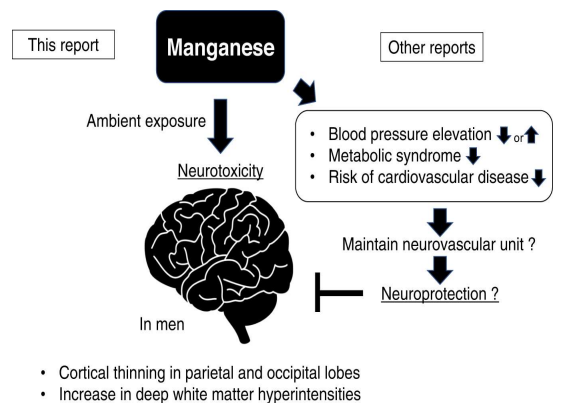


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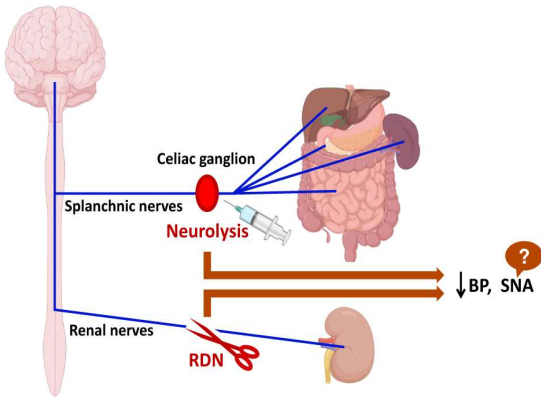
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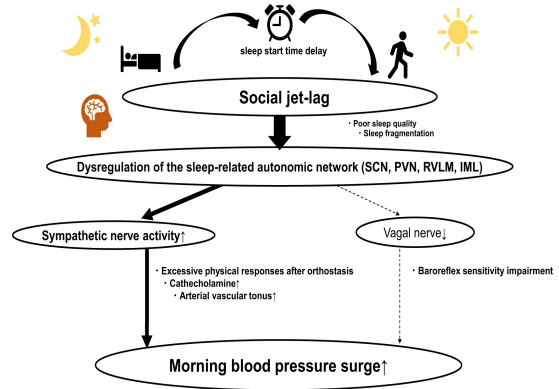
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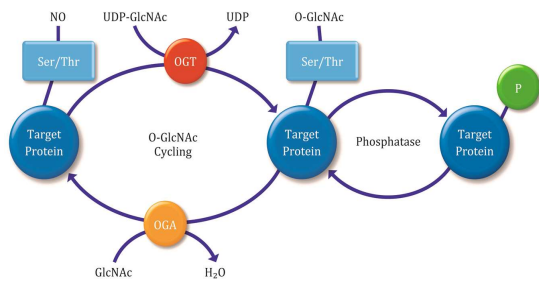
<Heart>

Rate pressure product (RPP)	Systolic blood pressure (mmHg)							
	160	150	140	130	120	110	100	90
110	17,600	16,500	15,400	14,300	13,200	12,100	11,000	9,900
105	16,800	15,750	14,700	13,650	12,600	11,550	10,500	9,450
100	16,000	15,000	14,000	13,000	12,000	11,000	10,000	9,000
95	15,200	14,250	13,300	12,350	11,400	10,450	9,500	8,550
90	14,400	13,500	12,600	11,700	10,800	9,900	9,000	8,100
85	13,600	12,750	11,900	11,050	10,200	9,350	8,500	7,650
80	12,800	12,000	11,200	10,400	9,600	8,800	8,000	7,200
75	12,000	11,250	10,500	9,750	9,000	8,250	7,500	6,750
70	11,200	10,500	9,800	9,100	8,400	7,700	7,000	6,300
65	10,400	9,750	9,100	8,450	7,800	7,150	6,500	5,850
60	9,600	9,000	8,400	7,800	7,200	6,600	6,000	5,400

Moderate-Increasing	12,956 (11,808-14,294)
Moderate-Stable	10,019 (9,046-10,930)
Low-Stable	8,342 (7,480-9,275)

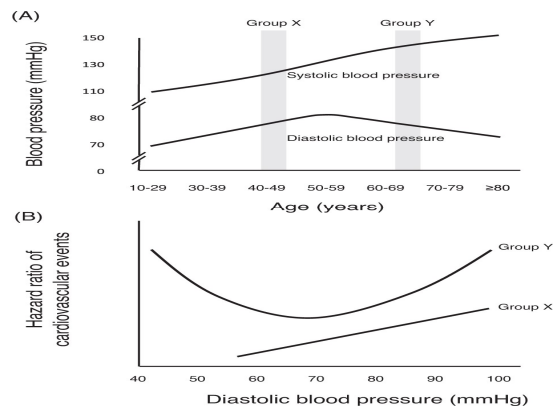
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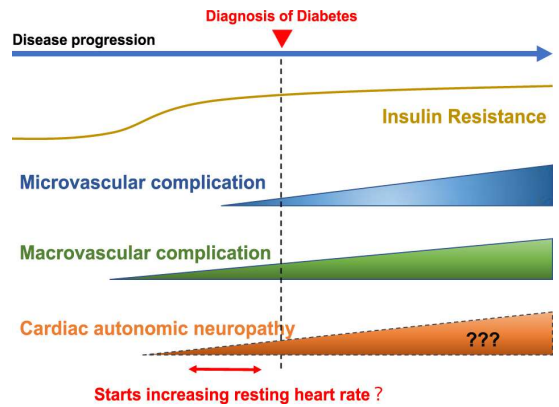
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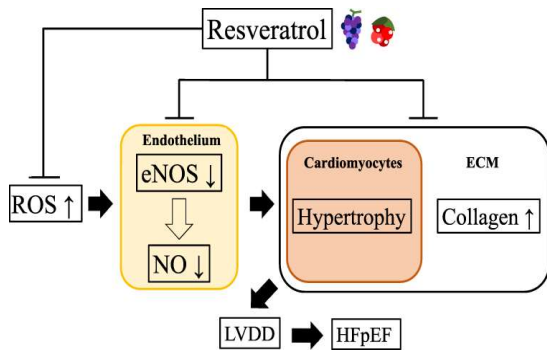
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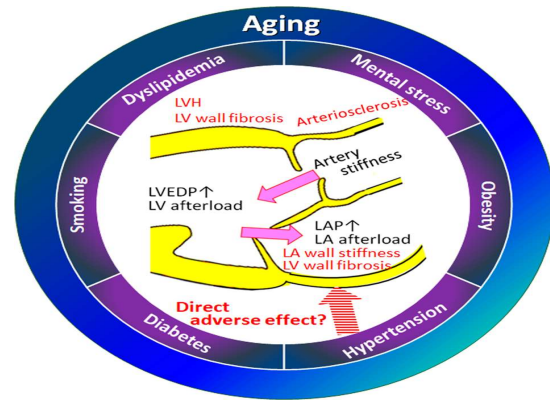


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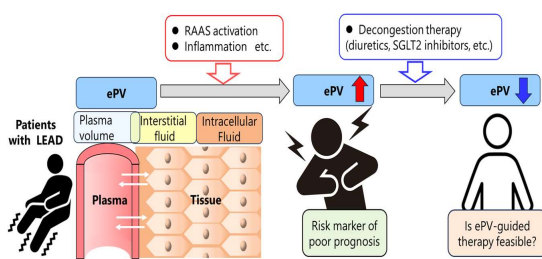


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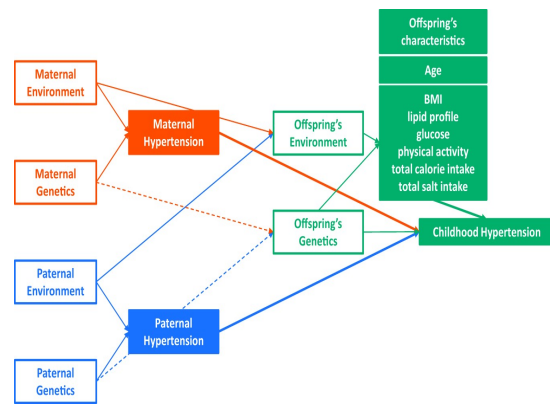


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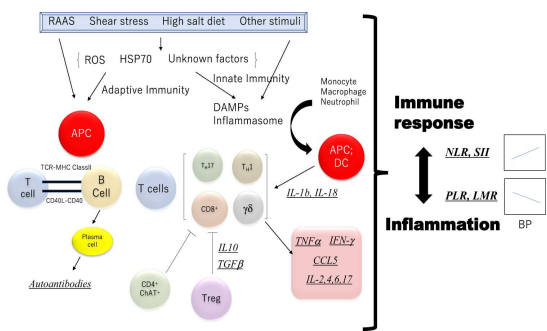
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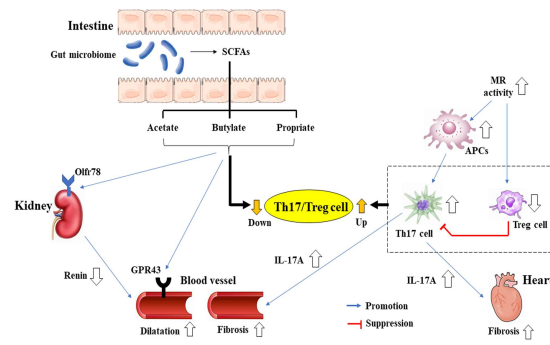
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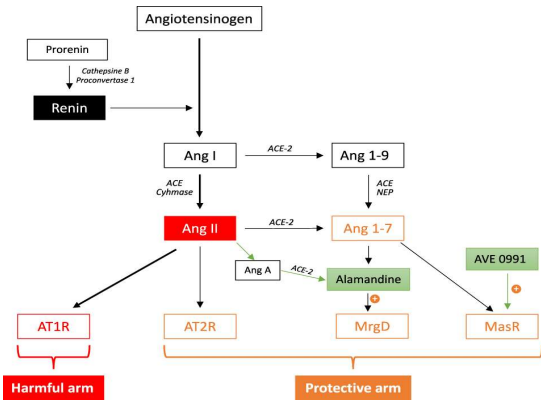
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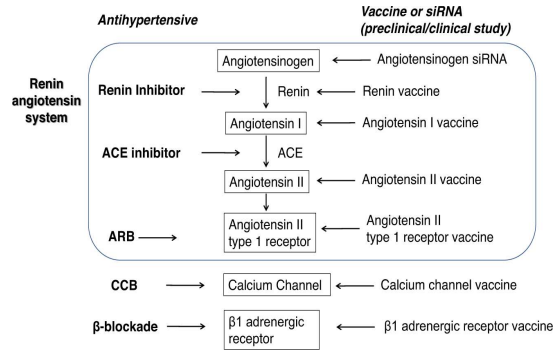
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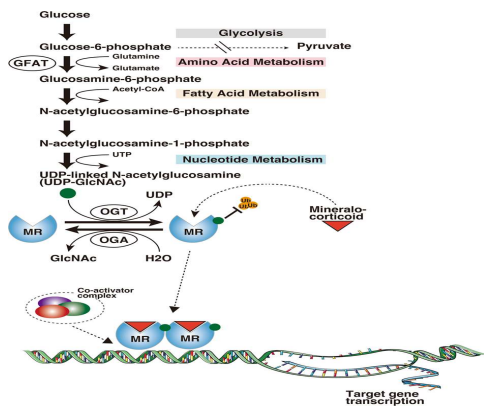


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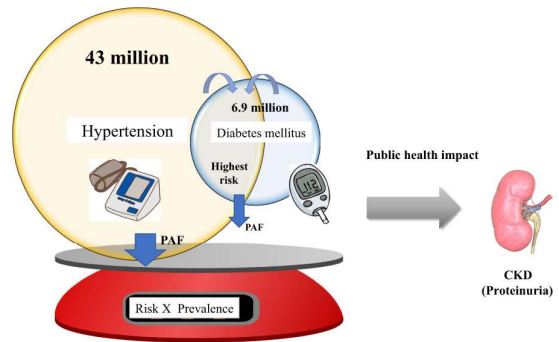


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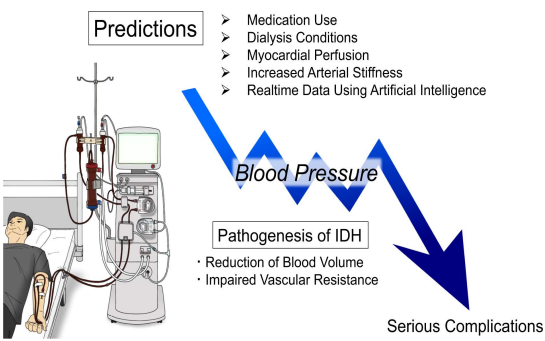
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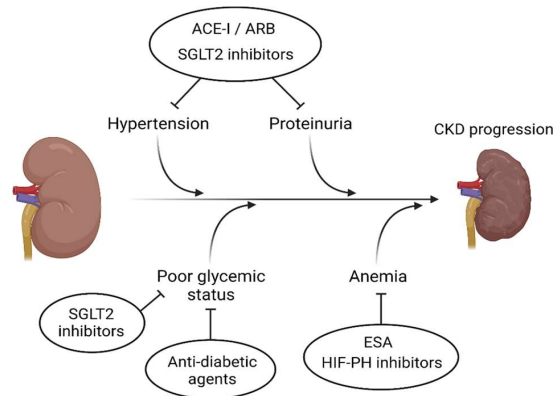
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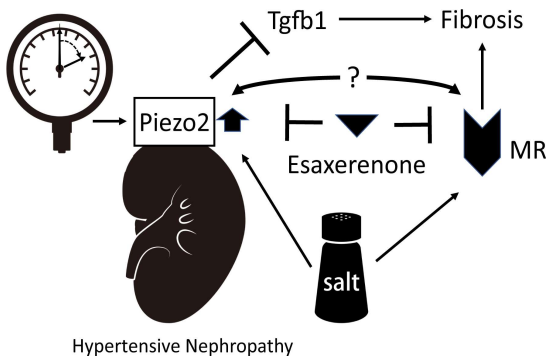
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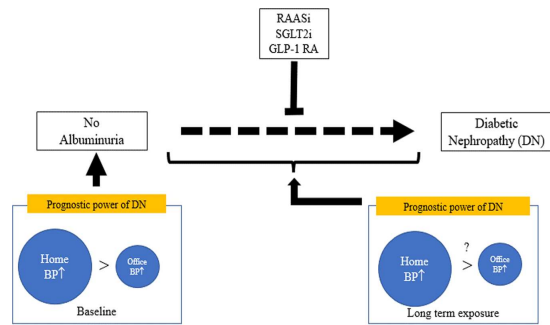


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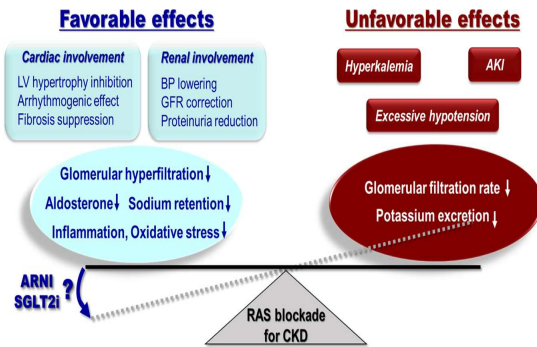
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<https://www.nature.com/articles/s41440-023-01239-5>

5



<https://doi.org/10.1038/s41440-023-01318-7>

<Renal Dnervation>

The findings of Kawabata's study
In case of poor control of office blood pressure

High value of pulse wave velocity (PWV) : office blood pressure affects PWV value
→ hard to distinguish functional/structural arterial stiffness

High value of cardio-ankle vascular index (CAVI) : office blood pressure may less affect CAVI value as compared to PWV
→ possibly structural arterial stiffness is dominant

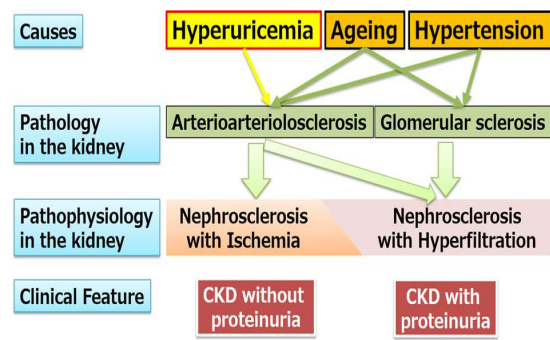
Next step: How to apply PWV/CAVI as a surrogate marker in the management of hypertension?

PWV-based management of hypertension may be useful for the cardiovascular risk assessment and patient education

While CAVI-based management of hypertension may be useful for the cardiovascular risk assessment, the establishment of own strategy is needed

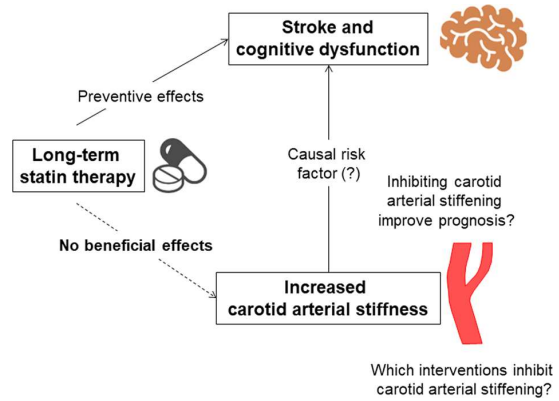
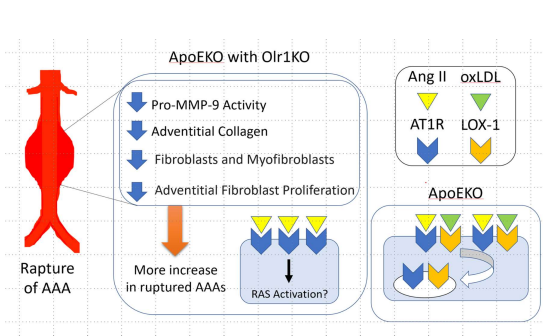
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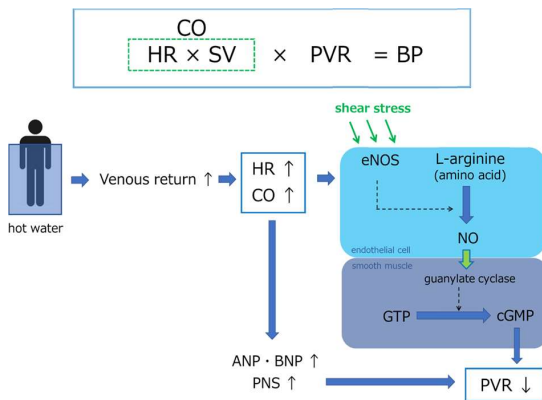
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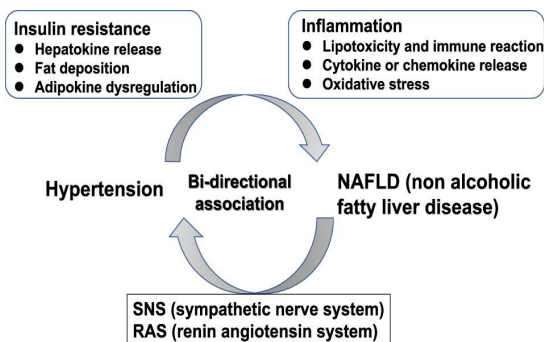
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<https://www.nature.com/articles/s41440-022-01152-3>



<https://www.nature.com/articles/s41440-023-01290-2>

<Metabolism>



Fatty liver → Hypertension

	Normoglycemia			Dysglycemia		
	Low FTI	Middle FTI	High FTI	Low FTI	Middle FTI	High FTI
Male	1	1.01 (0.71-1.42)	1.52 (1.06-2.17)	1.11 (0.71-1.74)	1.58 (1.05-2.39)	2.05 (1.43-2.92)
Female	1	1.12 (0.86-1.46)	1.86 (1.43-2.42)	1.56 (0.97-2.49)	1.06 (0.65-1.71)	2.98 (2.19-4.07)

Hazard ratios (95% CIs)

<https://www.nature.com/articles/s41440-022-01117-6>

<https://doi.org/10.1038/s41440-023-01209-x>

Females: LAP = (WC - 58) × TG

Males: LAP = (WC - 65) × TG

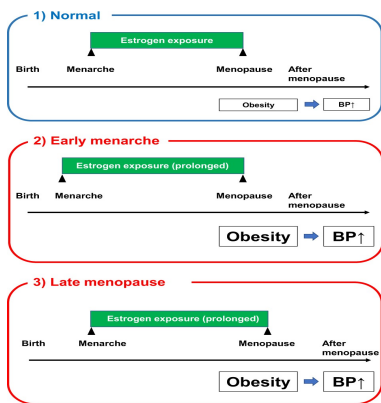
$$\text{Females: VAI} = \left[\frac{\text{WC}}{36.58 + (1.89 \times \text{BMI})} \right] \times \left[\frac{\text{TG}}{0.81} \right] \times \left[\frac{1.52}{\text{HDL}} \right]$$

$$\text{Males: VAI} = \left[\frac{\text{WC}}{39.68 + (1.88 \times \text{BMI})} \right] \times \left[\frac{\text{TG}}{1.03} \right] \times \left[\frac{1.31}{\text{HDL}} \right]$$

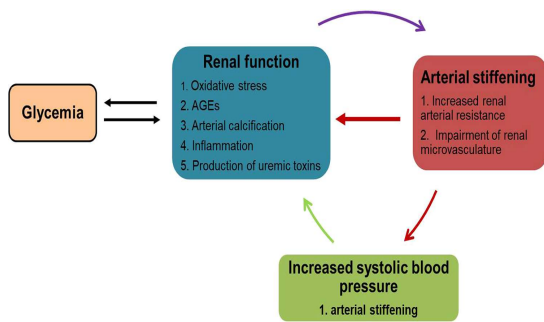
$$\text{ABSI} = \frac{\text{WC}}{\text{BMI}^{\frac{2}{3}} \times \text{height}^{\frac{1}{2}}}$$

$$\text{BRI} = 364.2 - 365.5 \times \sqrt{1 - \frac{\left[\frac{\text{WC}}{2\pi} \right]^2}{(0.5 \times \text{height})^2}}$$

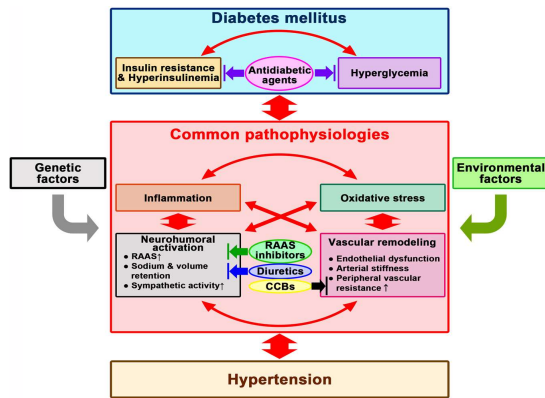
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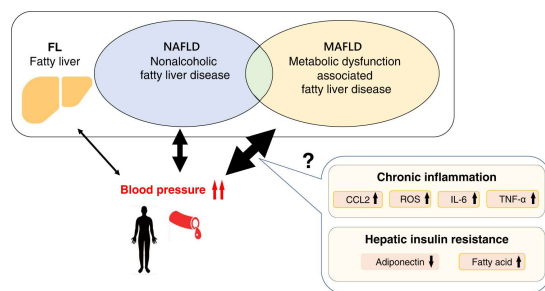
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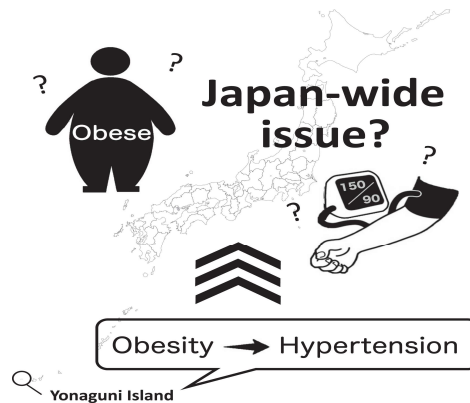
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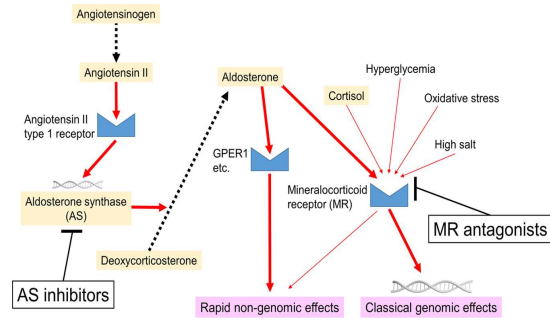
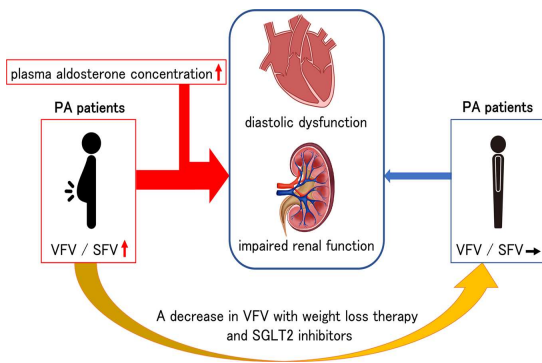


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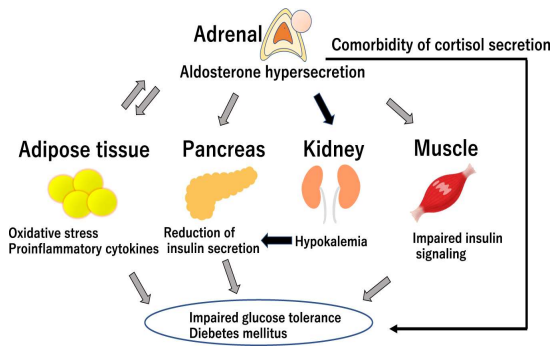
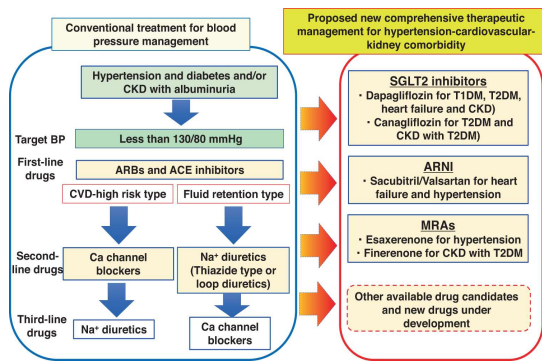
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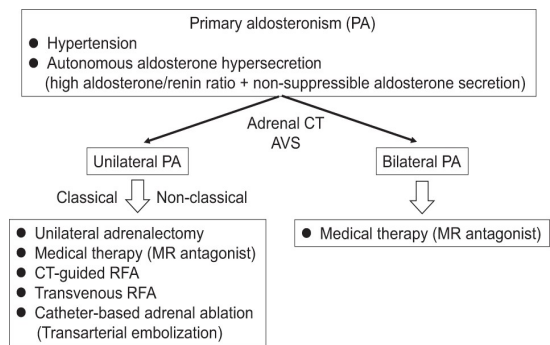
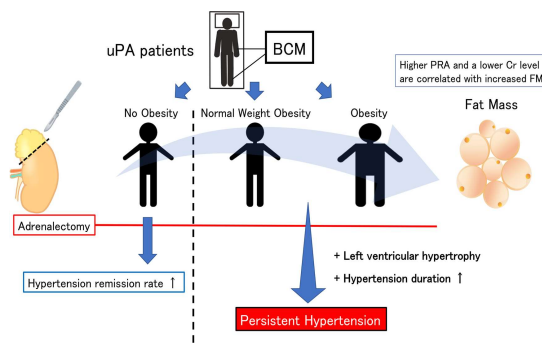
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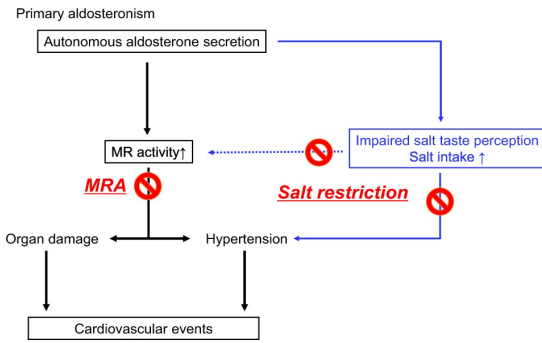


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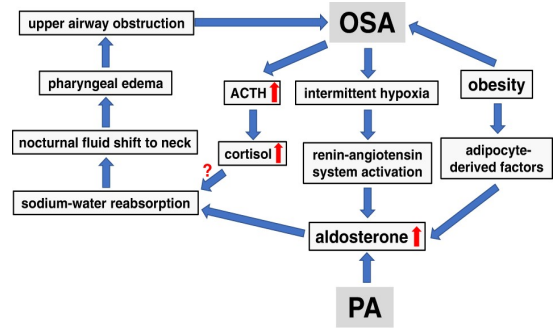
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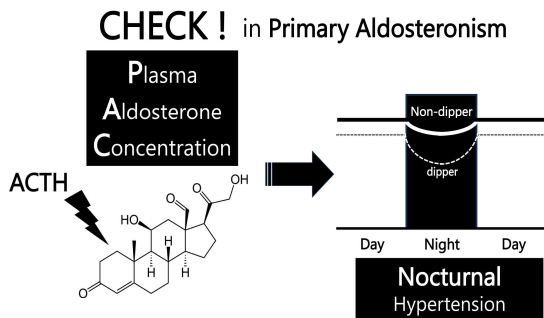
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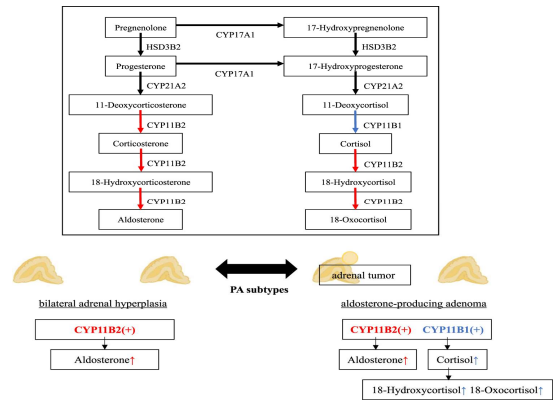
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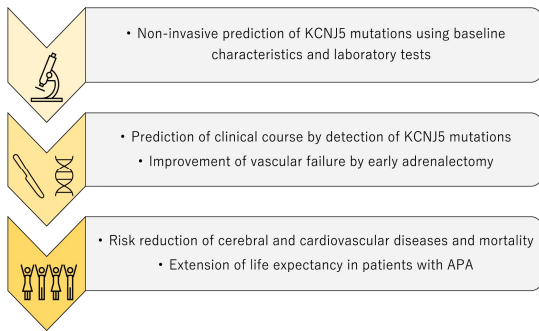
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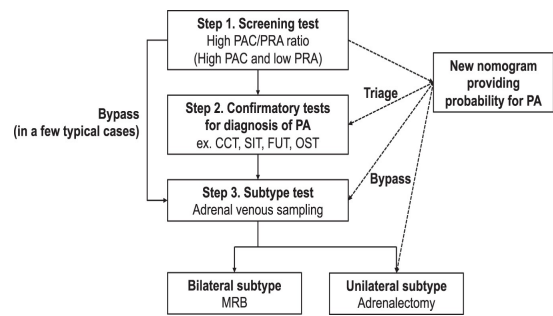
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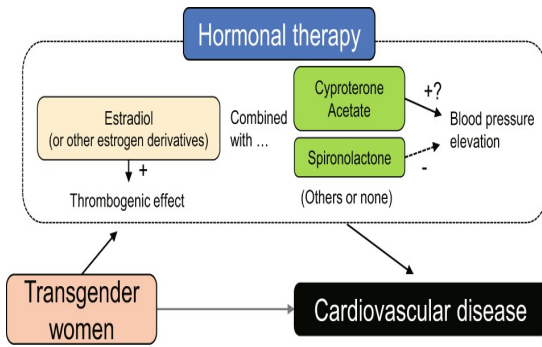
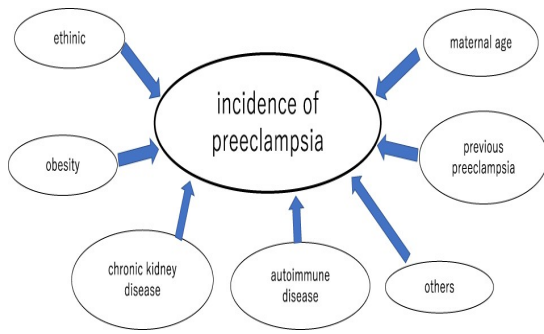


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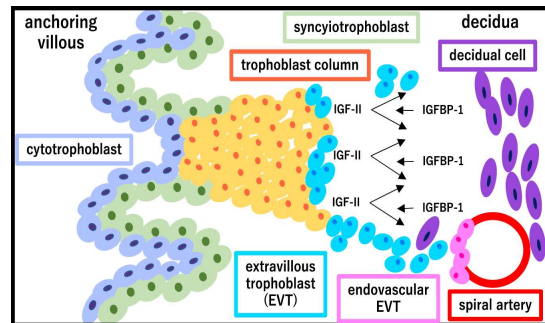
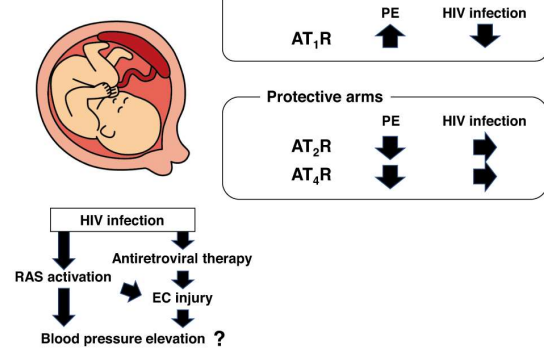
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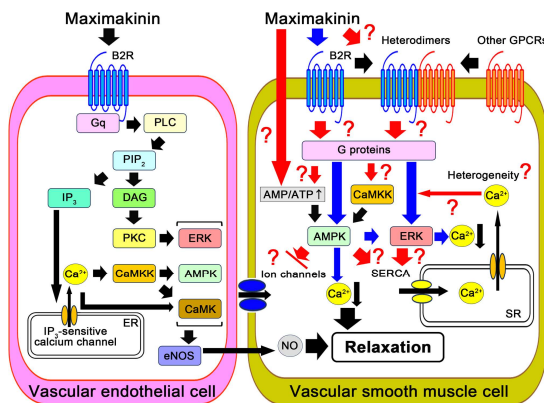
Expression of angiotensin receptors in placenta



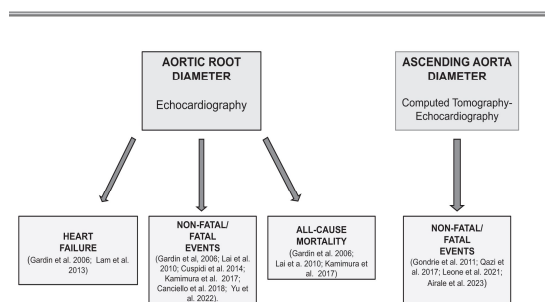
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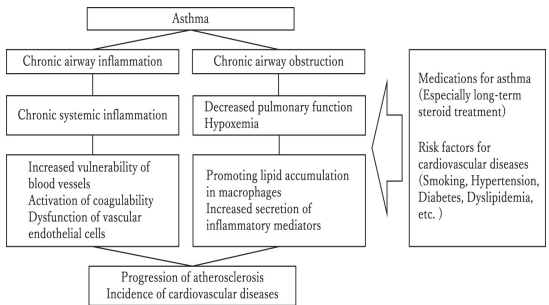


AORTIC DIAMETER AS PREDICTOR OF CV DISEASE AND MORTALITY

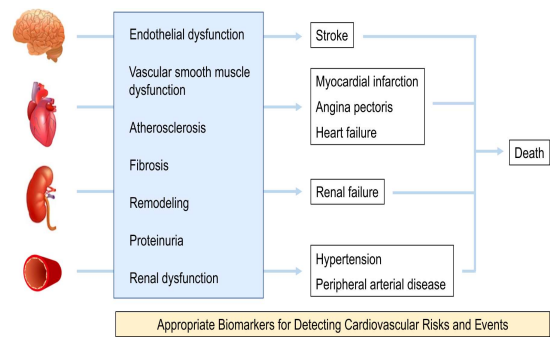


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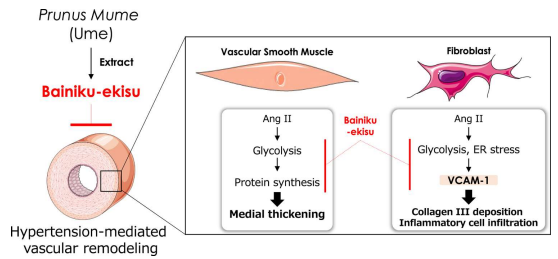
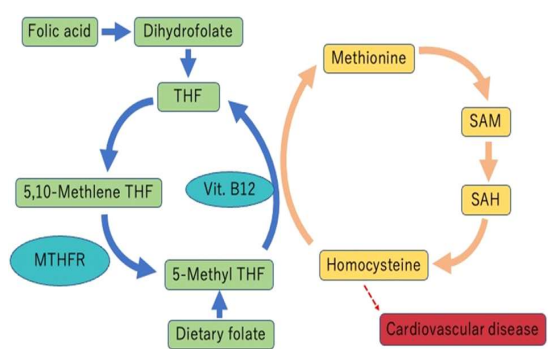


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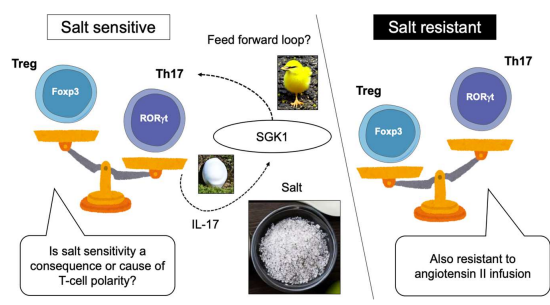


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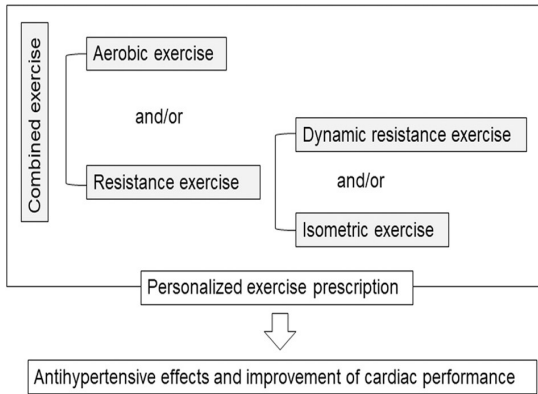


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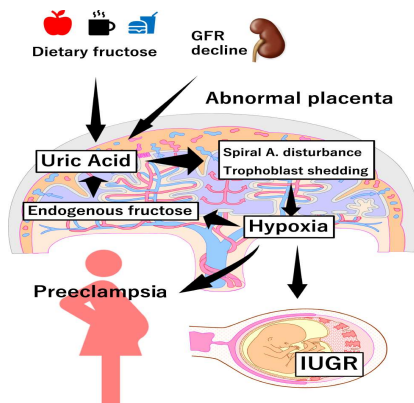


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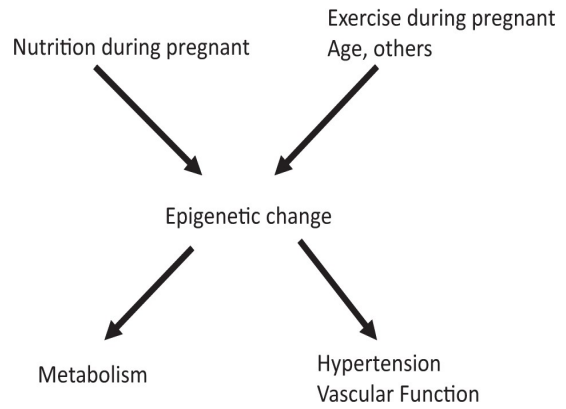
	DRT	IHT
Target muscle	Systemic muscles including trunk and all limbs	Hand to forearm muscles
Work way	8 dynamic exercise: 3 sets of 10 repetitions	4 sets of 2 min work (2 sets per hand)
Work load	Initially 50% of 1RM with gradual increase according to subject's energy space	Constant 30% of MVC
Muscle component	Hand grip strength Systemic muscle strength	
Vascular component	FMD Peak blood flow	
Autonomic component	LFHF ₂₀ LFHF ₃₀	
Net SBP change	-8 mmHg P<0.05	-5 mmHg i.u.s.

<https://www.nature.com/articles/s41440-023-01274-2>

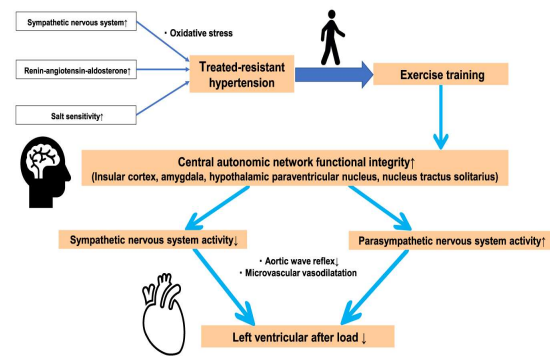
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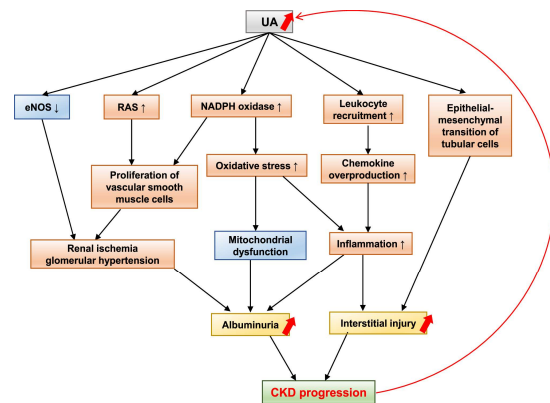
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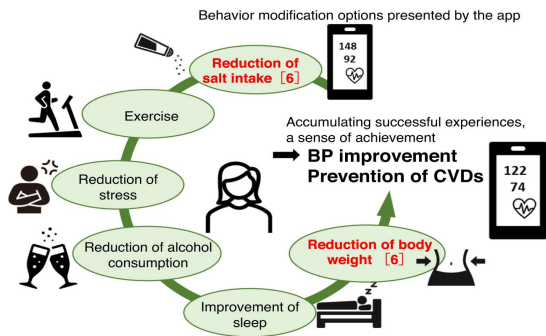


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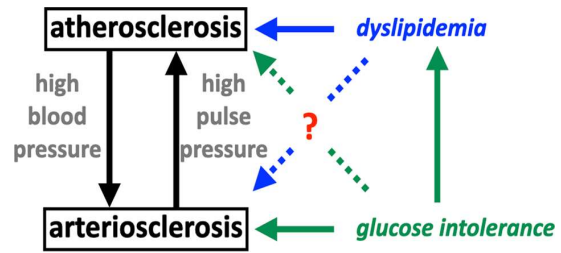


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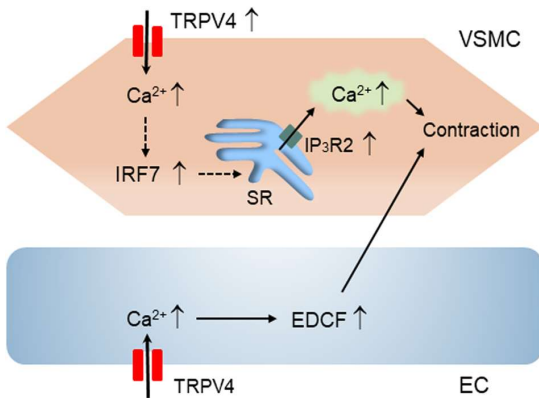
Mobile app-based lifestyle modification to overcome clinical inertia



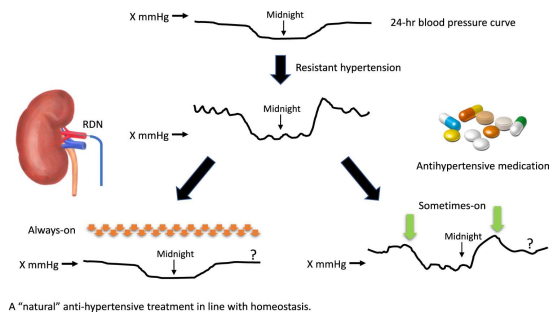
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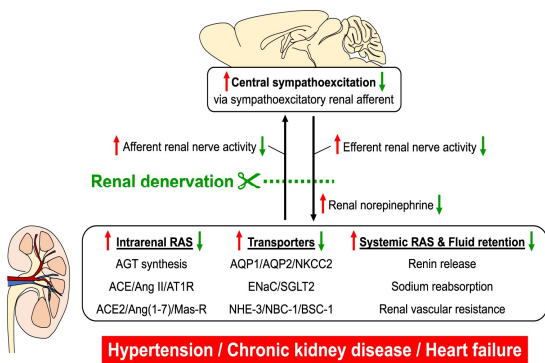
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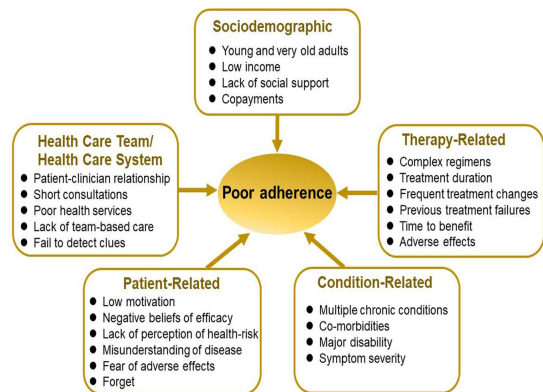
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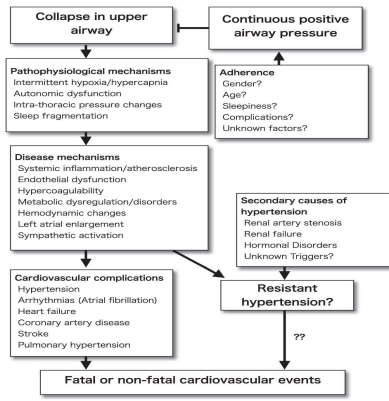
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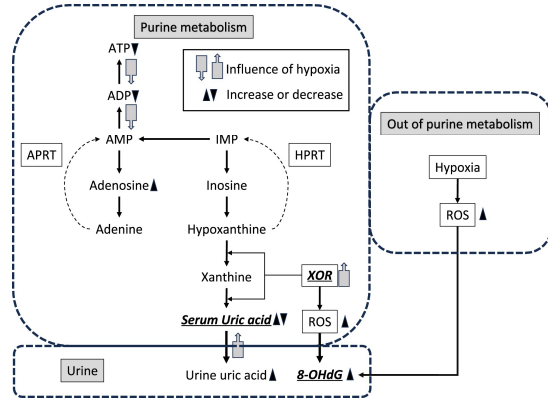
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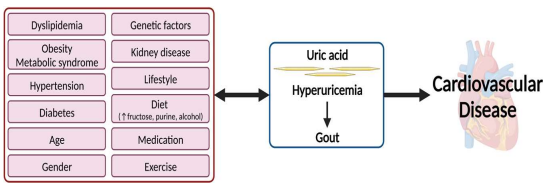
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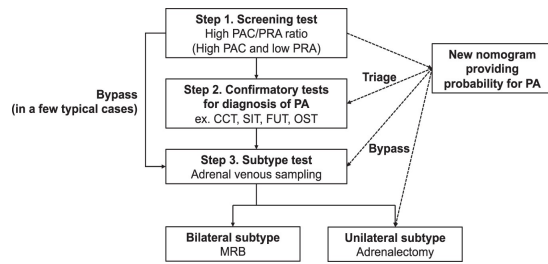
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