

# 13. Physical Exam Murmur Maneuvers

<u>INTERVENTION</u>	<u>PHYSIOLOGIC EFFECT</u>	<u>CLINICAL APPLICATION</u>
<u>Valsalva maneuver</u>	<ul style="list-style-type: none"> <li>↑ Intrathoracic pressure</li> <li>↓ LV volume</li> <li>↓ RV volume</li> </ul>	<ul style="list-style-type: none"> <li>1. HOCM = ↑ Murmur</li> <li>2. MVP = Earlier Click</li> <li>3. Single S2</li> </ul>
<u>Prompt squat</u>	<ul style="list-style-type: none"> <li>↑ Mean arterial BP</li> <li>↑ Central volume</li> <li>↑ Resistance</li> </ul>	<ul style="list-style-type: none"> <li>1. HOCM ↓ Murmur</li> <li>2. Aortic insufficiency M ↑</li> </ul>
<u>Isometric Exercise</u>	↑BP, ↑HR ↑CO ↑EDP	All murmurs louder, except HOCM and MVP
<u>Amyl Nitrate</u>	Vasodilation ↓BP, ↑HR, ↑CO	↓ MR, VSD, AI AS, PS ↑ HOCM

## POSITION CHANGE

1. <u>Sit to stand</u>	<ul style="list-style-type: none"> <li>↓ Venous return</li> <li>↓ Ventricular &amp; stroke volume</li> </ul>	All murmurs softer except <ul style="list-style-type: none"> <li>1. HOCM</li> <li>2. Earlier Systolic click of MVP</li> </ul>
2. <u>Left lateral decubitus</u>	Heart closer to chest wall	More Audibility of S3, S4, Mitral stenosis
3. <u>Sit up and lean forward</u>	Heart closer to chest wall	Louder Aortic insufficiency & Friction Rubs
4. <u>Hyperextension Shoulder</u>	Angulation of subclavian	↓ Subclavian bruit (innocent)

HOCM-Hypertrophic obstructive cardiomyopathy, was called IHSS-Idiopathic hypertrophic subaortic stenosis

MVP-Mitral Valve Prolapse, was called Barlow's Syndrome

Austin Flint-Mitral Stenosis due Aortic Insufficiency blowing the anterior leaflet of Mitral valve shunt.