Medroxyprogesterone Acetate (MPA) Versus Natural Progesterone (NP)

**Lipid Profile**¹:
MPA adversely affects lipid profile and negates the beneficial effects of CEE
NP does not negate the beneficial effects of CEE and modestly improves cholesterol levels

**Liver function**
MPA is contraindicated in patients with liver dysfunction²
NP does not effect liver enzymes or cause liver-related side effects³,⁴

**Cardiovascular events**
MPA may cause fluid retention and edema²
NP has antihypertensive action⁶ and can be safely used to treat preclampsia⁶,⁷
MPA increases incidence of CHD, stroke and VTE⁸, and diminished the cardio-protective effect of estrogens⁹.
NP, with estrogen, prevents the coronary vasospasms (in rhesus monkey¹⁰) and enhances the beneficial effect of estrogen on exercise-induced myocardial ischemia in postmenopausal women¹¹

**Glucose/Insulin**
MPA has been found to cause deterioration of glucose tolerance or hyperinsulemia or both¹²
NP augments the pancreatic response to glucose and increases the release of insulin¹²

**Sleep and Mood**
MPA can cause insomnia, mental depression, and anxiety²
NP improves the quality of sleep¹³, and has sedative properties¹⁴

**Bone Density**
MPA can reduce bone density 5-6%²,¹⁵
NP is a bone trophic hormone¹⁶

**Quality of Life/Menopause Symptoms**
Vasomotor symptoms, somatic complaints, anxiety, depression, and perceptions of patterns of vaginal bleeding.
When compared with a MPA-containing regimen, women using NP-containing HRT experienced significant improvement in symptoms and 80% reported overall satisfaction¹⁷

See attached Table 1.
TABLE 1
Medroxyprogesterone Acetate (MPA) Versus Natural Progesterone (NP)

| **Lipid profile**       | MPA: adversely effects lipid profile  
|                          | negates the beneficial effects of CEE  
|                          | NP: does not negate the beneficial effects of CEE  
|                          | modestly improves cholesterol levels  
| **Liver function**       | MPA: contraindicated in patients with liver dysfunction  
|                          | NP: does not effects liver enzymes or cause liver related side-effects  
| **Cardiovascular events**| MPA: may cause fluid retention and edema  
|                          | increases incidence of CHD, stroke and VTE,  
|                          | and diminishes the cardio-protective effect of estrogens  
|                          | NP: has antihypertensive action and can be safely used to treat preclampsia  
|                          | with estrogen, prevents the coronary vasospasms (in rhesus monkeys) and enhances the beneficial effect of estrogen on exercise-induced myocardial ischemia in postmenopausal women  
| **Glucose/Insulin**       | MPA: has been found to cause deterioration of glucose tolerance or hyperinsulemia or both  
|                          | NP: augments the pancreatic response to glucose and increases the release of insulin  
| **Sleep and Mood**       | MPA: can cause insomnia, mental depression, and anxiety  
|                          | NP: improves the quality of sleep and has sedative properties  
| **Bone**                 | MPA: may decrease bone density as much as 5-6%  
|                          | NP: stimulates osteoblasts, bone-trophic  
| **Quality of Life/ Menopausal Symptoms** | When compared with a MPA-containing regimen, women using NP-containing HRT experienced significant improvement in symptoms and 80% reported overall satisfaction  

¹ The Writing Group for the PEPI Trial; Effects of Estrogen or Estrogen/Progestin Regimens on Heart Disease-Risk Factors in Postmenopausal Women; JAMA, Jan 1995; 273:3;199-208.  
³ Bolaji, et.al. Low-dose progesterone therapy in oestrogenised postmenopausal women; effects on plasma lipids, lipoproteins and liver function parameters; EUROBS, 48 (1993) 61-68.  